STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

Water Supply Availability Committee (WSAC)

Thursday, April 10, 2024, 10 a.m. – 11:30 a.m.

Zoom: Click to join. (Call-in: 253.205.0468; Meeting ID: 816 5686 6078; Passcode: 038972)

Meeting Objectives – April:

- Share pertinent info and assess water supply conditions in Washington for winter.

Agenda

Time	Agenda item	Responsible
10:00 a.m.	Welcome and agenda review Recap: Drought Declaration and implications	Caroline Mellor, Ecology
10:10 a.m.	Regional Climate Setting/ ENSO	Karin Bumbaco, OWSC
10:25 a.m.	Mountain Conditions	Matt Warbritton, NRCS
10:40 a.m.	Streamflow and Groundwater	Nick Sutfin, USGS
10:55 a.m.	Yakima Project	Mik Lewicki, BOR
11:05 a.m.	Water Supply Forecasts	Amy Burke, NWS
11:20 a.m.	Discussion: What concerns do folks have for drought recovery and Water Year 2025?	All participants Ecology facilitates
11:25 a.m.	Wrap-up	Caroline Mellor, Ecology

Committee Purpose

WSAC provides an important consultative and advisory role to Ecology related to current and forecasted water supply conditions and whether the hydrologic drought threshold has been met or is forecasted to be met: seventy-five percent of normal water supply within a geographic area (RCW 43.83B.405 and WAC 173-166-050).

Resources

WSAC Website: Water Supply Availability Committee - WA State Department of Ecology

Ecology Drought homepage: Drought response - WA State Department of Ecology

Contact

Committee Chair: Caroline Mellor, Statewide Drought Lead, WA Department of Ecology

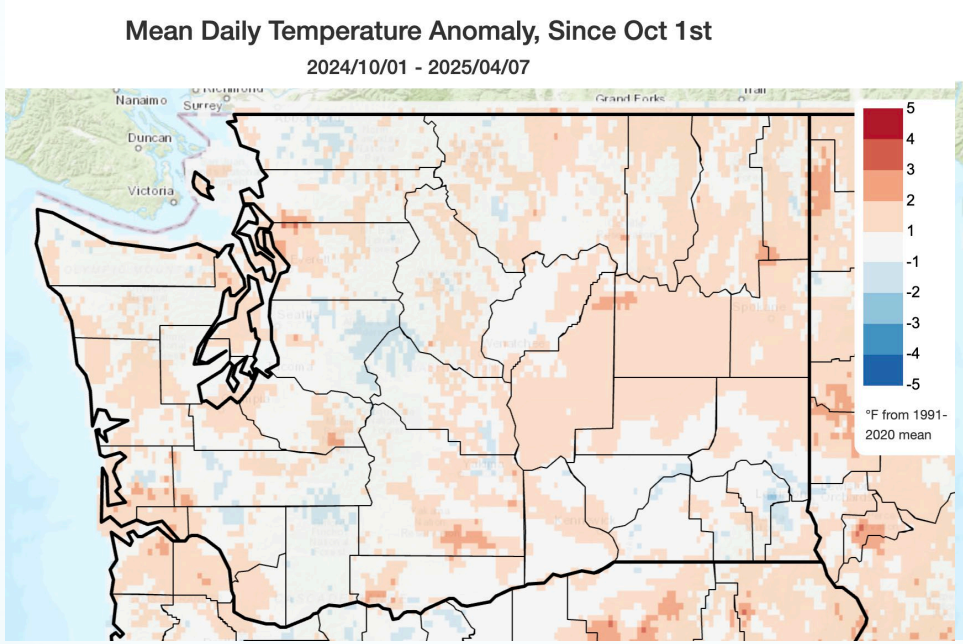
Caroline.Mellor@ecy.wa.gov | (c) 360.628.4666

Current Conditions and Seasonal Outlook

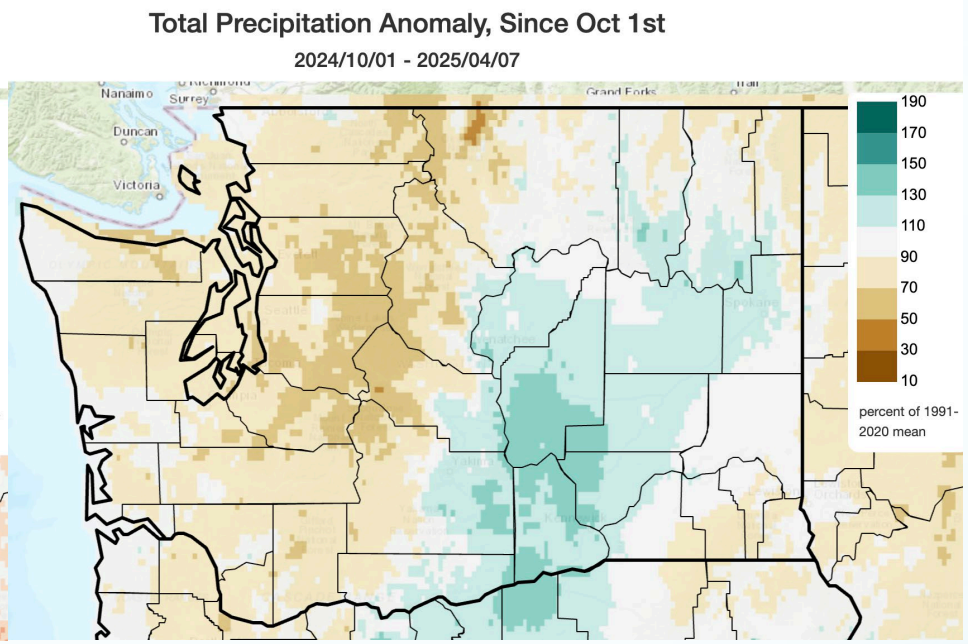
Karin Bumbaco
Washington State Climate Office
Climate Impacts Group
University of Washington
April 10, 2025

Water Year 2025

Temperature



Precipitation



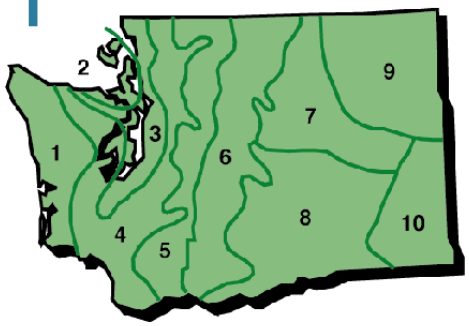
Climate Toolbox

- Averaged statewide, Oct-Mar temperatures were above normal (+0.6°F)*
- Averaged statewide, Oct-Mar precipitation was near-normal (97% of normal)

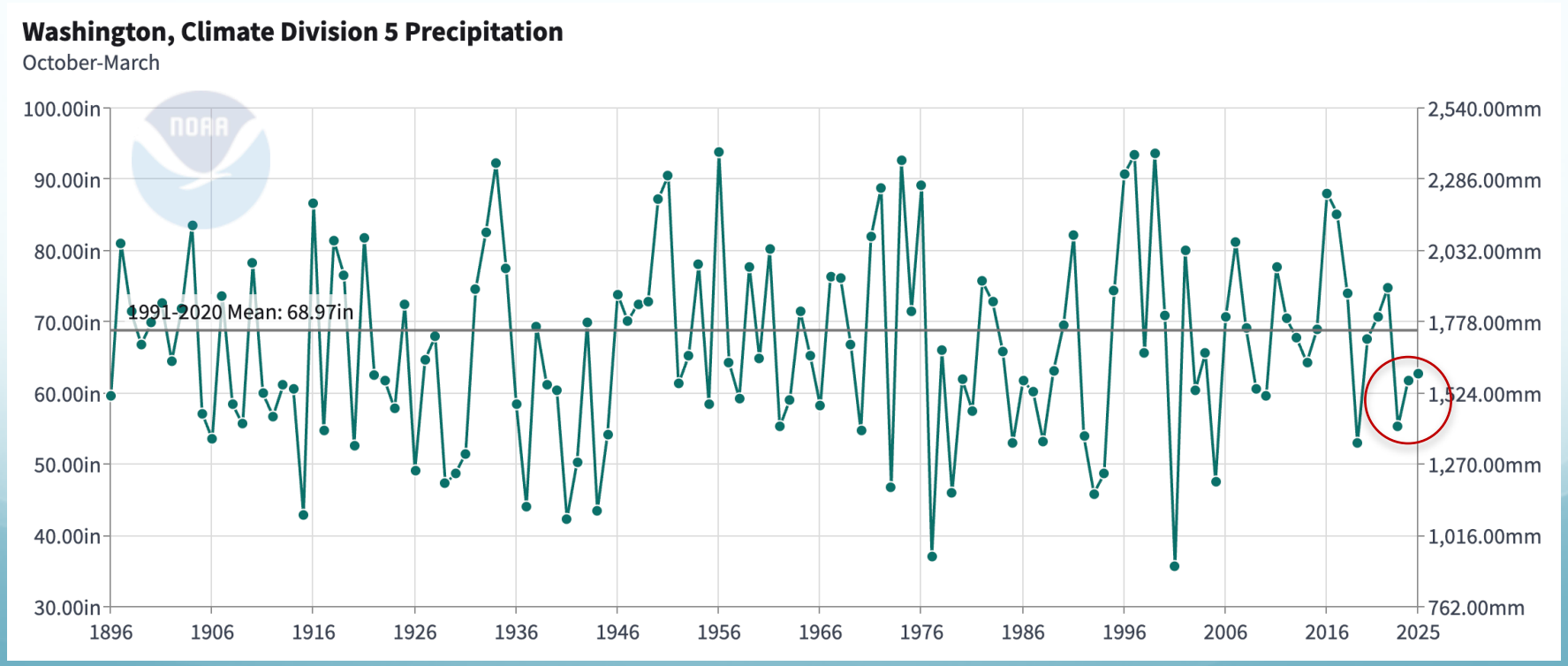
*Normal is 1991-2020

Cascade Mountain West Climate Division

- Averaged across the division, Oct-Mar precipitation was below normal (91% of normal)

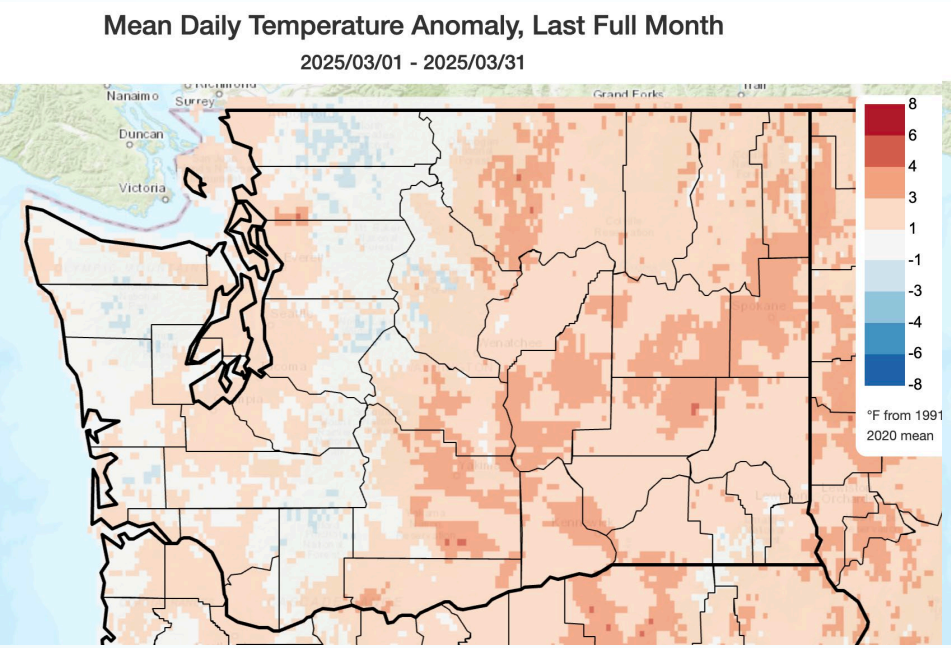


Cascade Mountain West (#5)

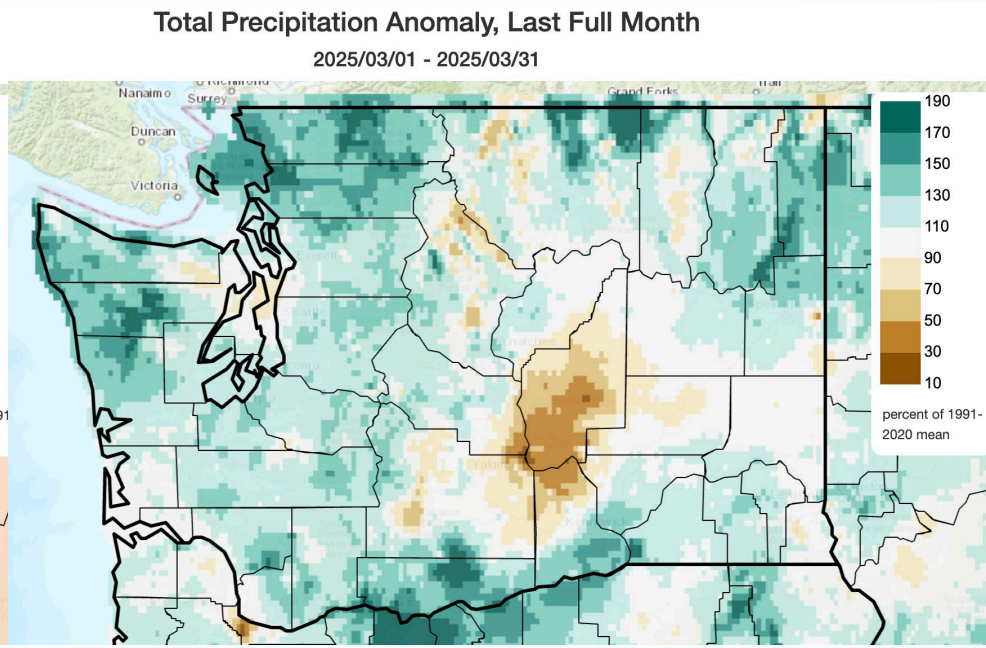


March 2025

Temperature



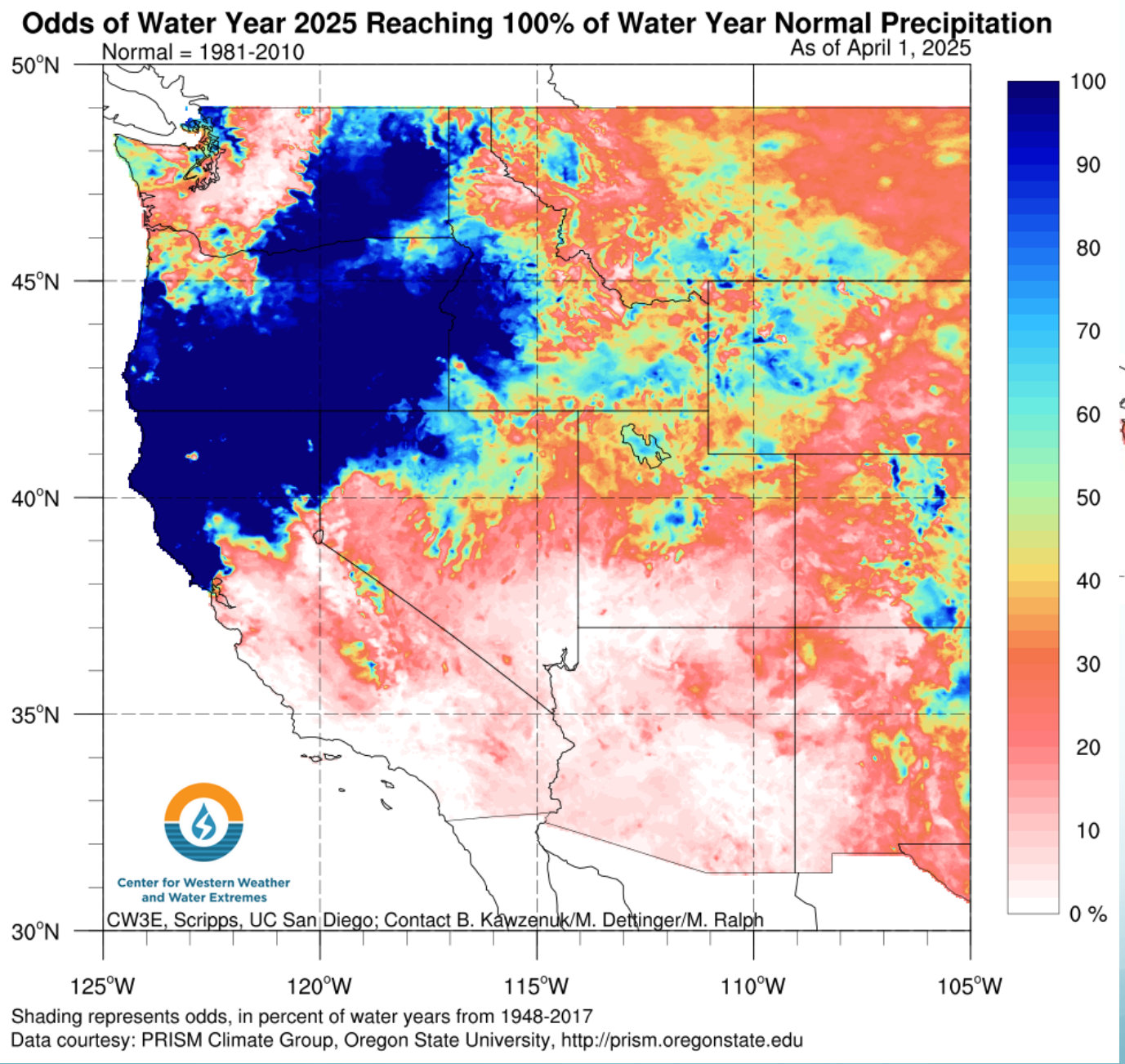
Precipitation



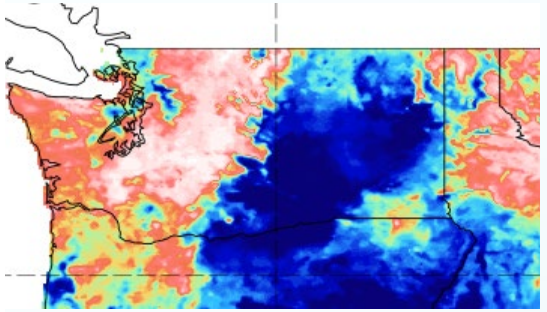
Climate Toolbox

- Averaged statewide, March temperatures were above normal (+1.9°F), tying as the 20th warmest on record*
- Averaged statewide, March precipitation was above normal (115% of normal)

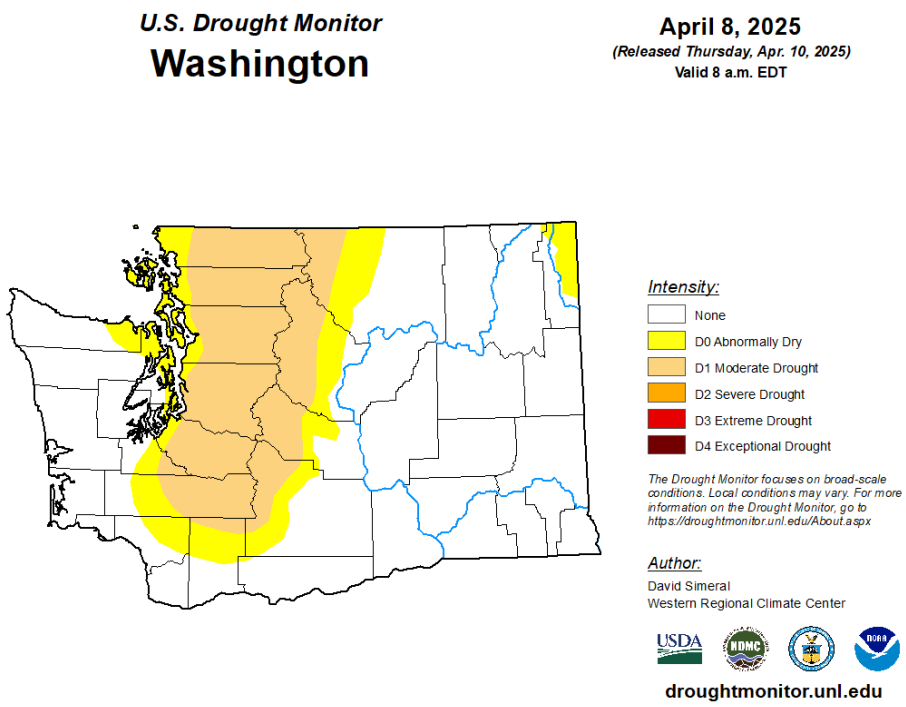
*Records since 1895; Normal is 1991-2020

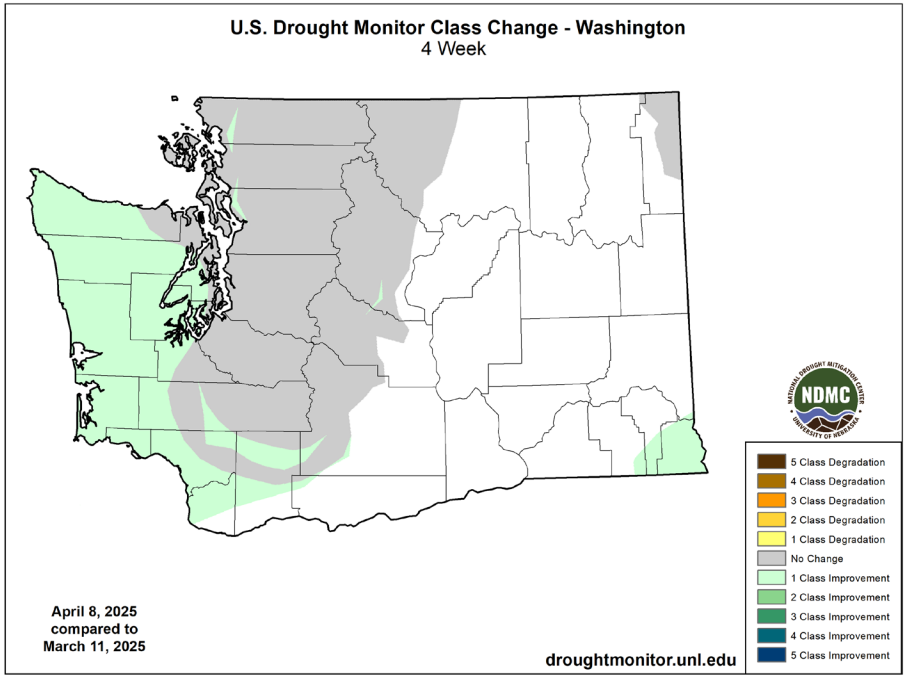


as of March 1, 2025



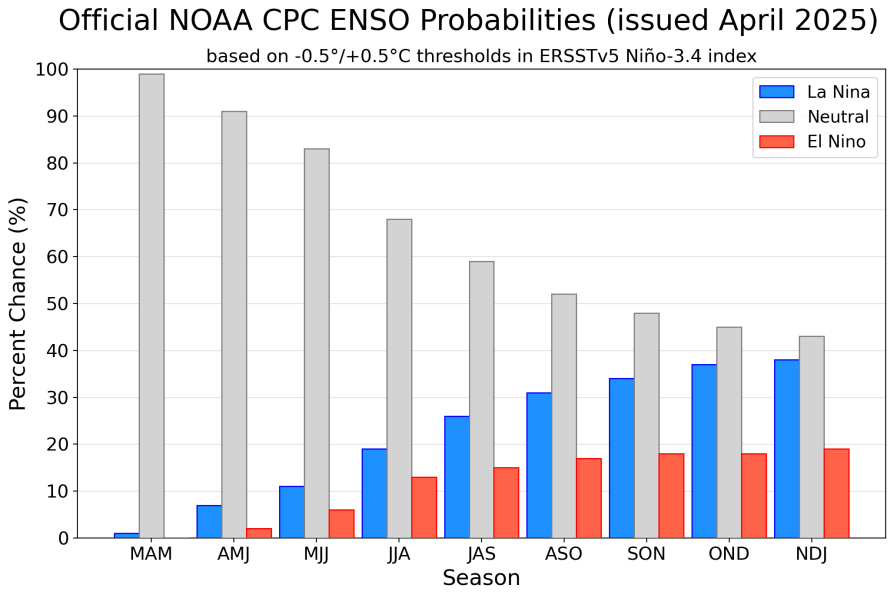
U.S. Drought Monitor

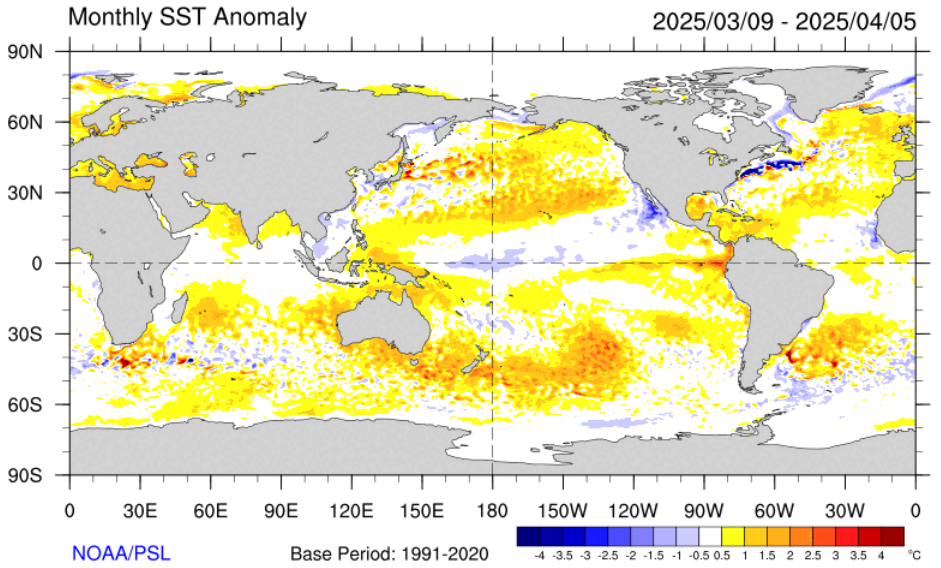




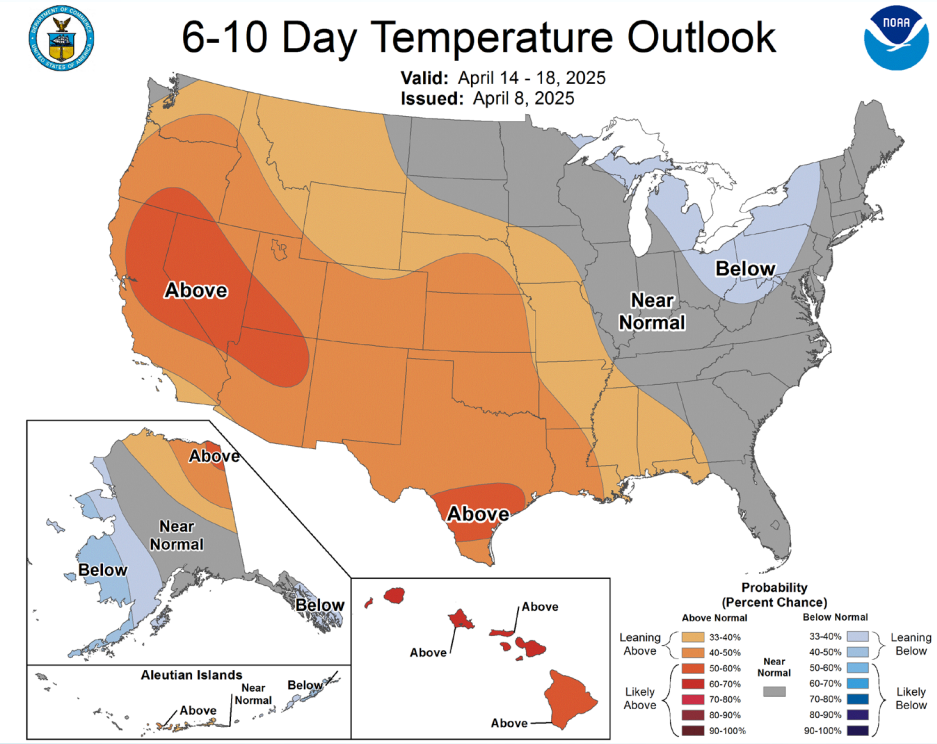
Current Status: Neutral

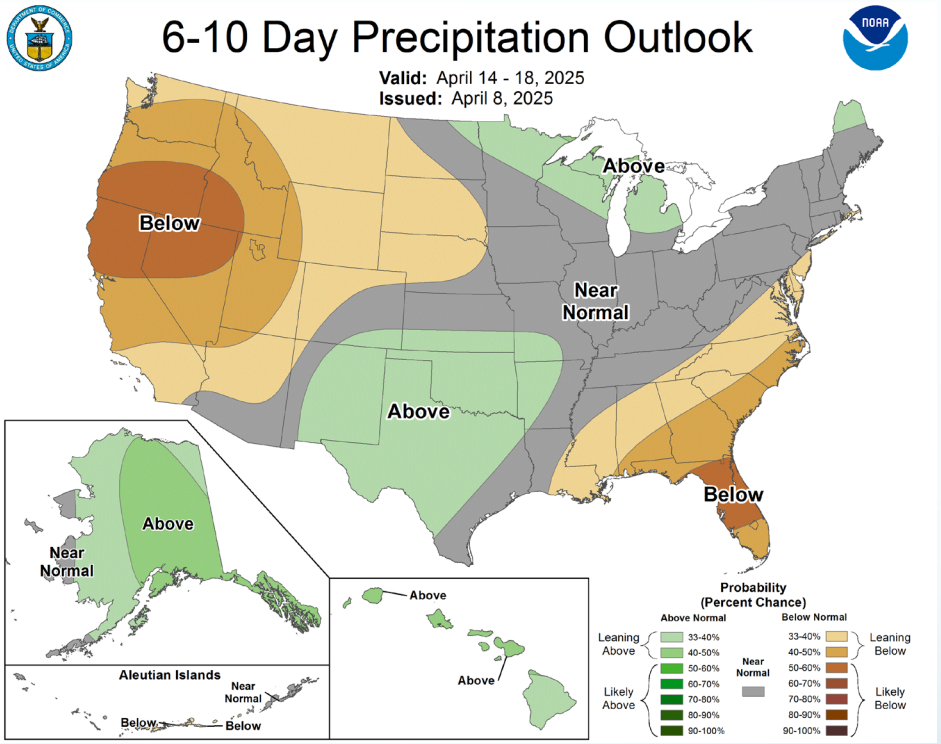
Final La Niña Advisory: **Neutral Conditions**



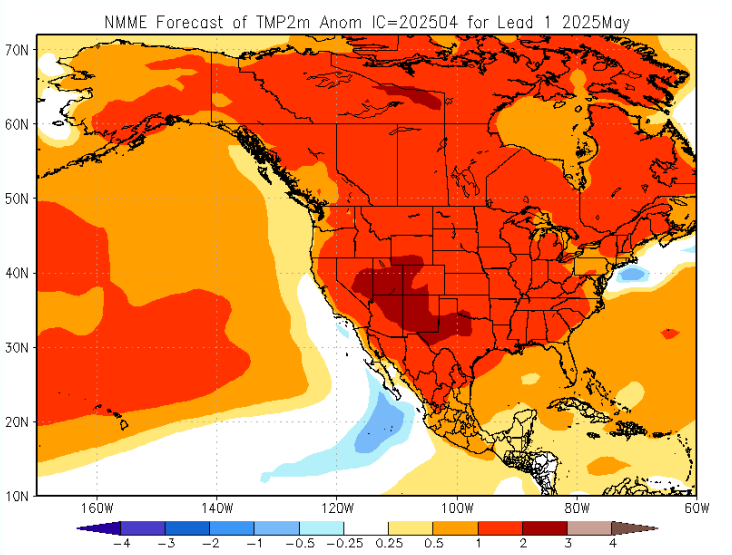


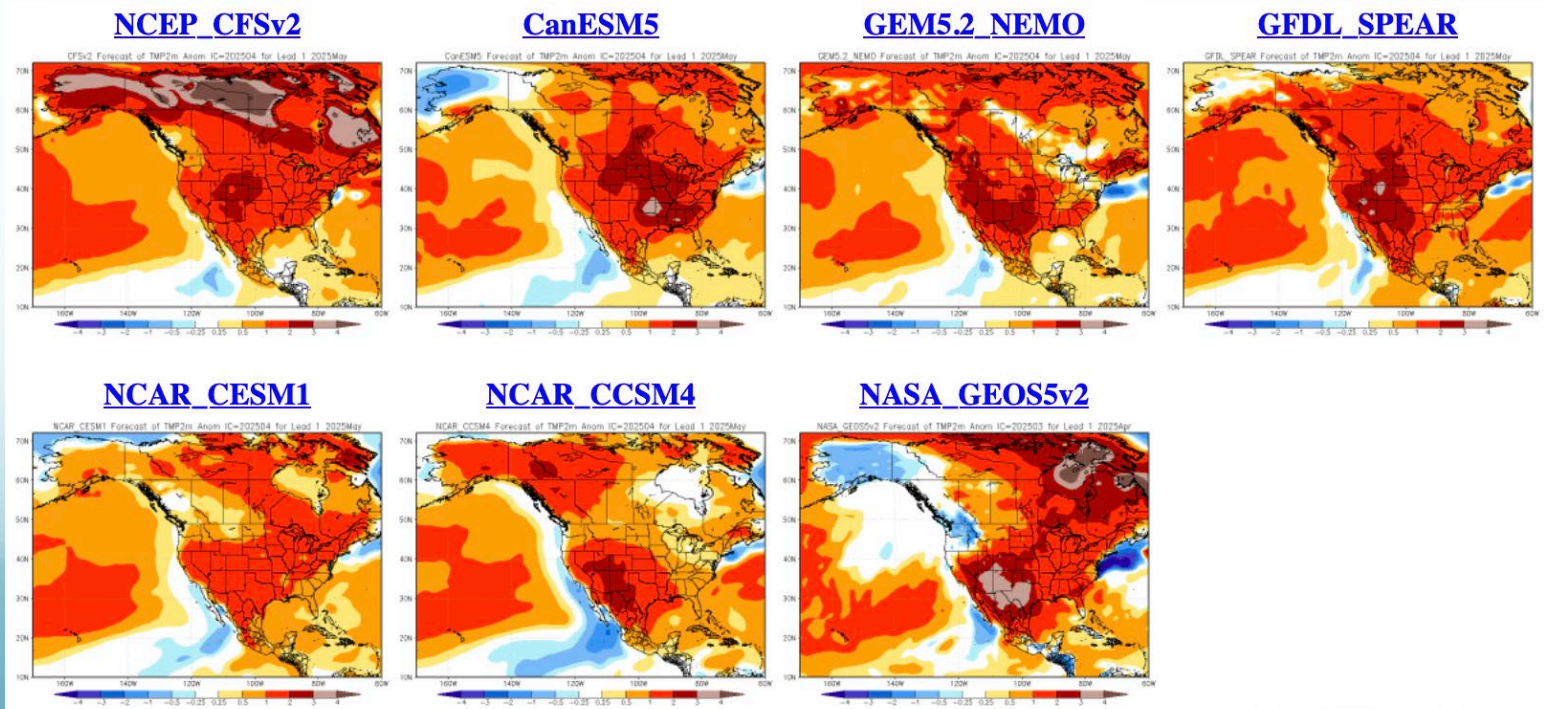
Climate Prediction Center 6-10 Day Outlook



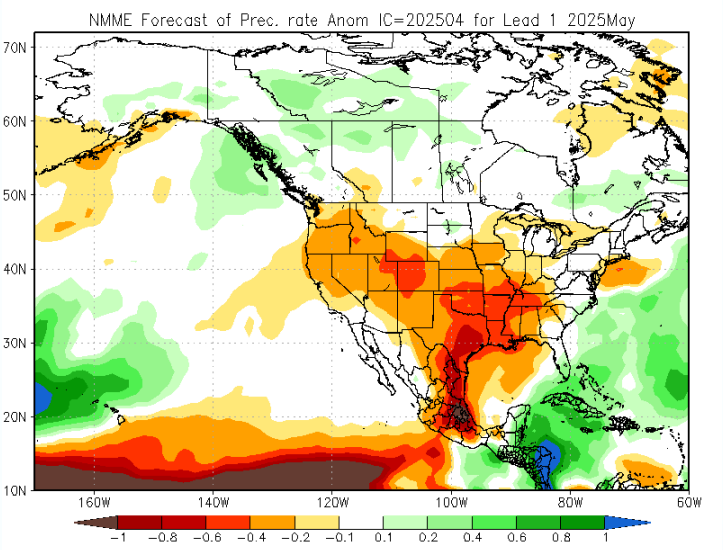


NMME: **May** Temperatures

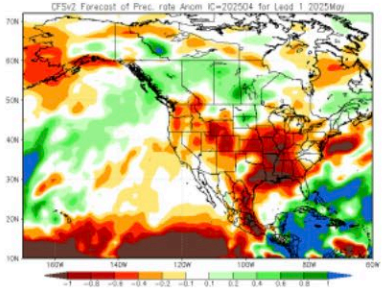




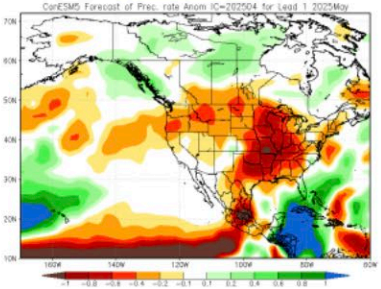
NMME: **May** Precipitation



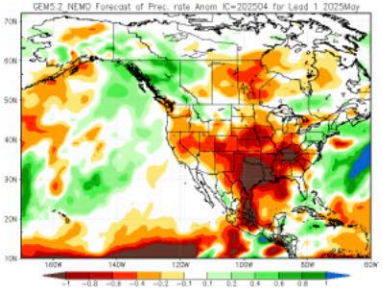
NCEP_CFSv2



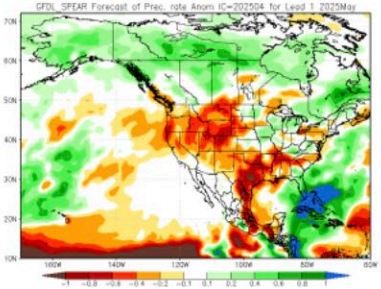
CanESM5



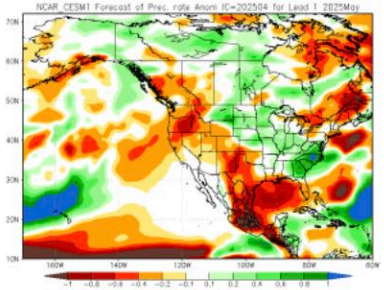
GEM5.2_NEMO



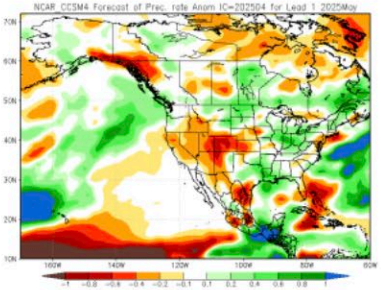
GFDL_SPEAR



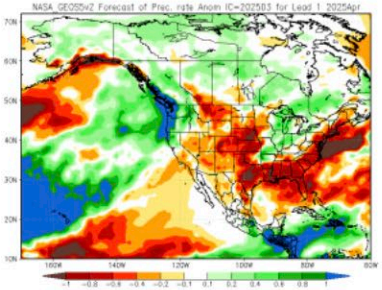
NCAR_CESM1



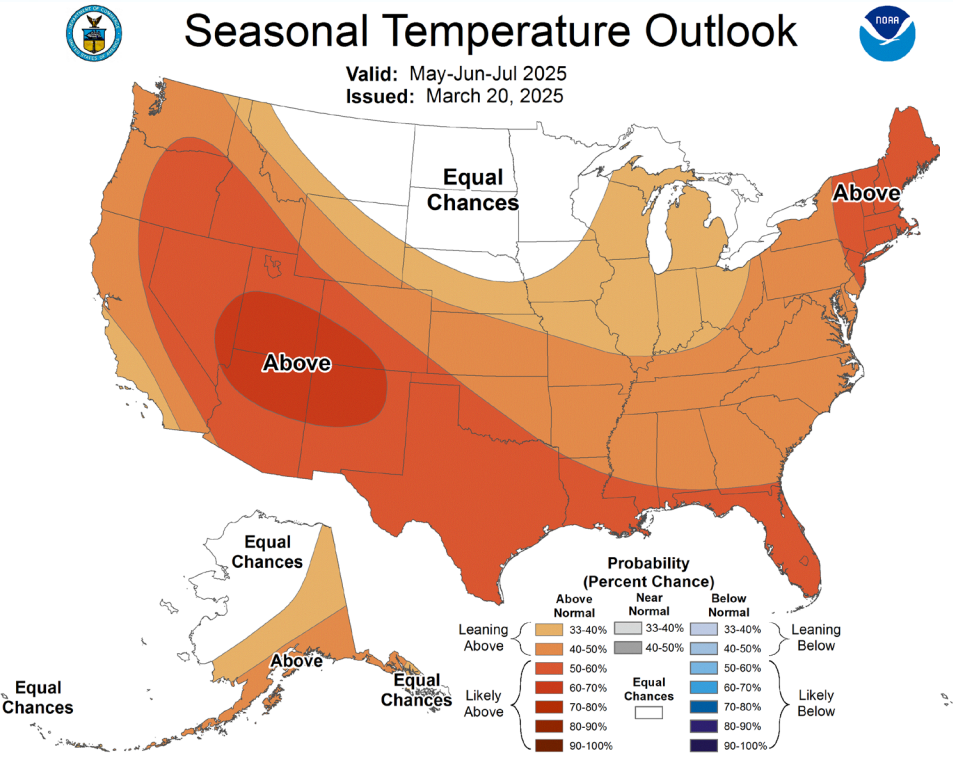
NCAR_CCSM4

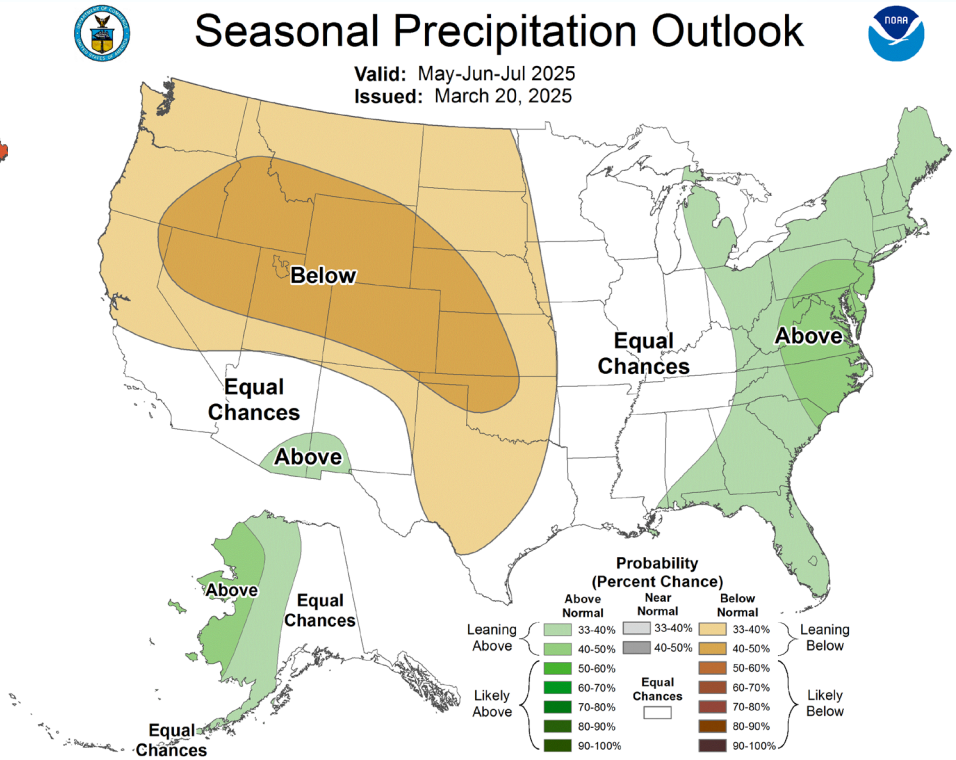


NASA_GEOS5v2



Climate Prediction Center Outlook: **May-Jul**





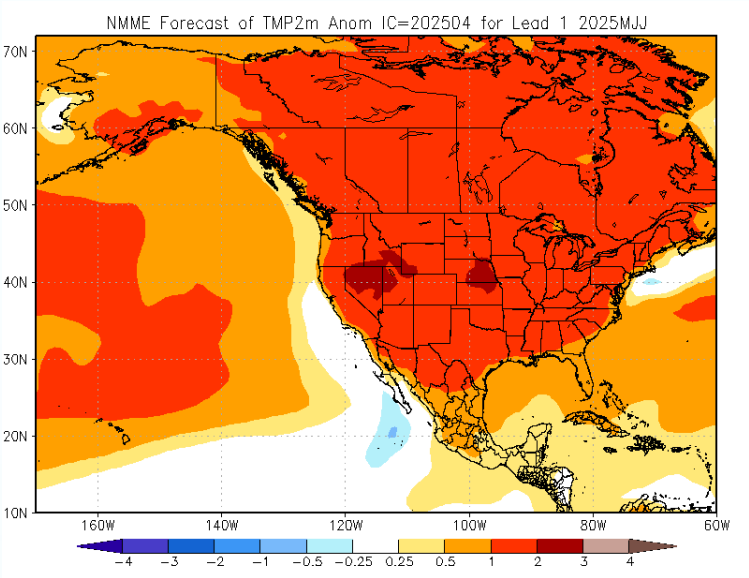
June-August: Higher odds of above normal temps and below normal precip

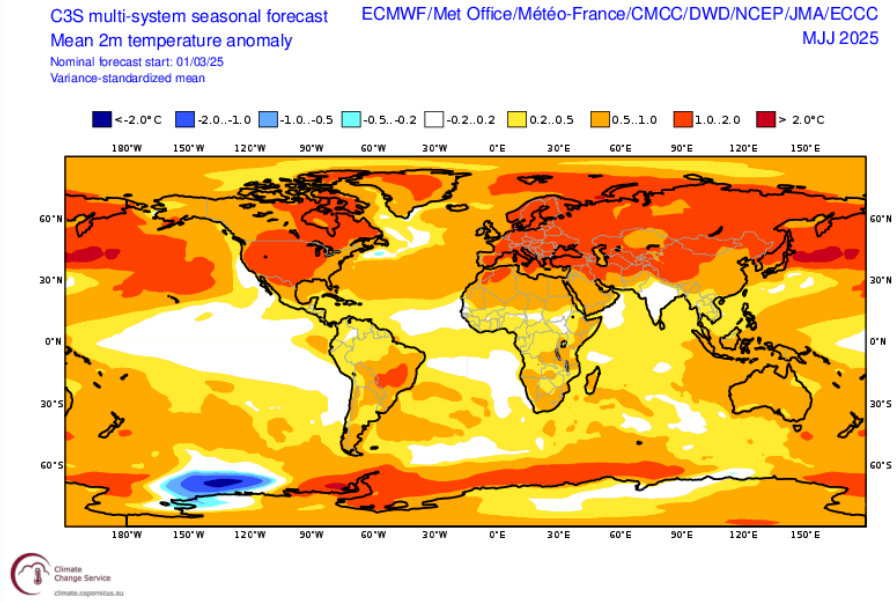
May-July

NMME

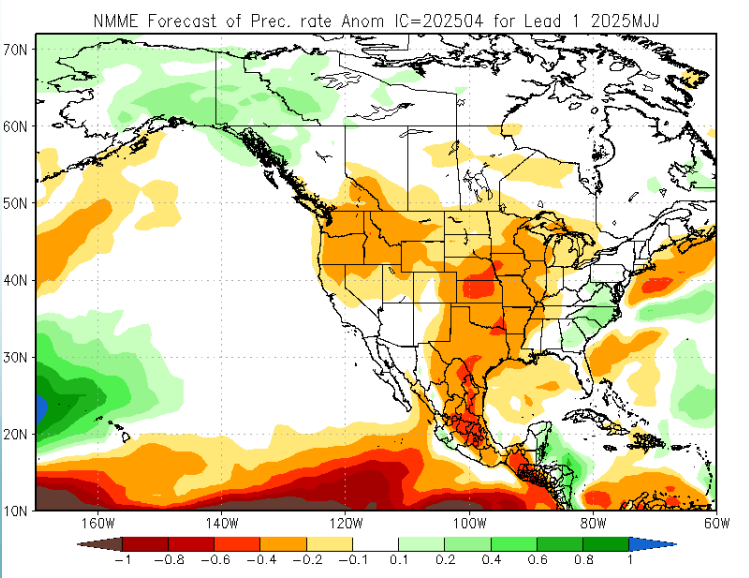
IMME

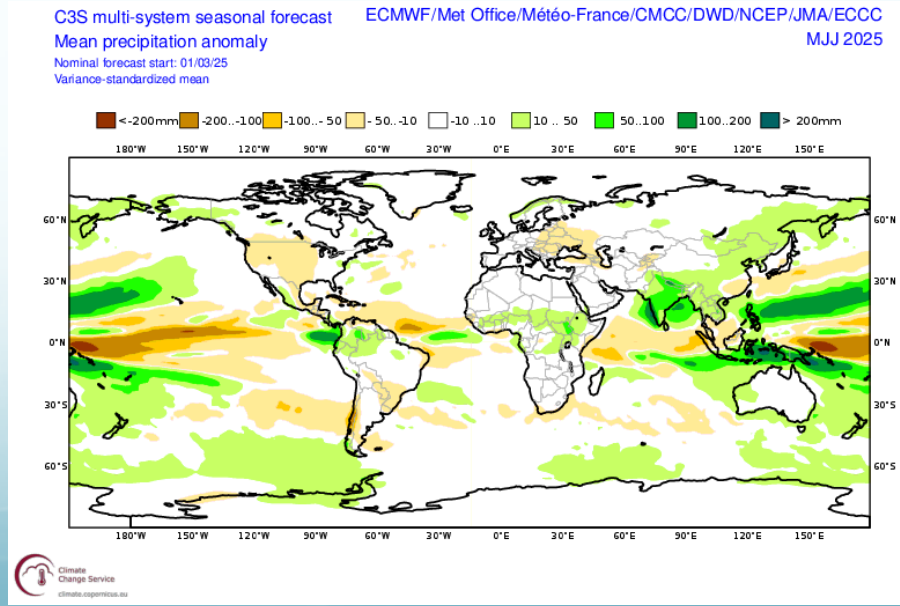
Temp





Precip





Summary

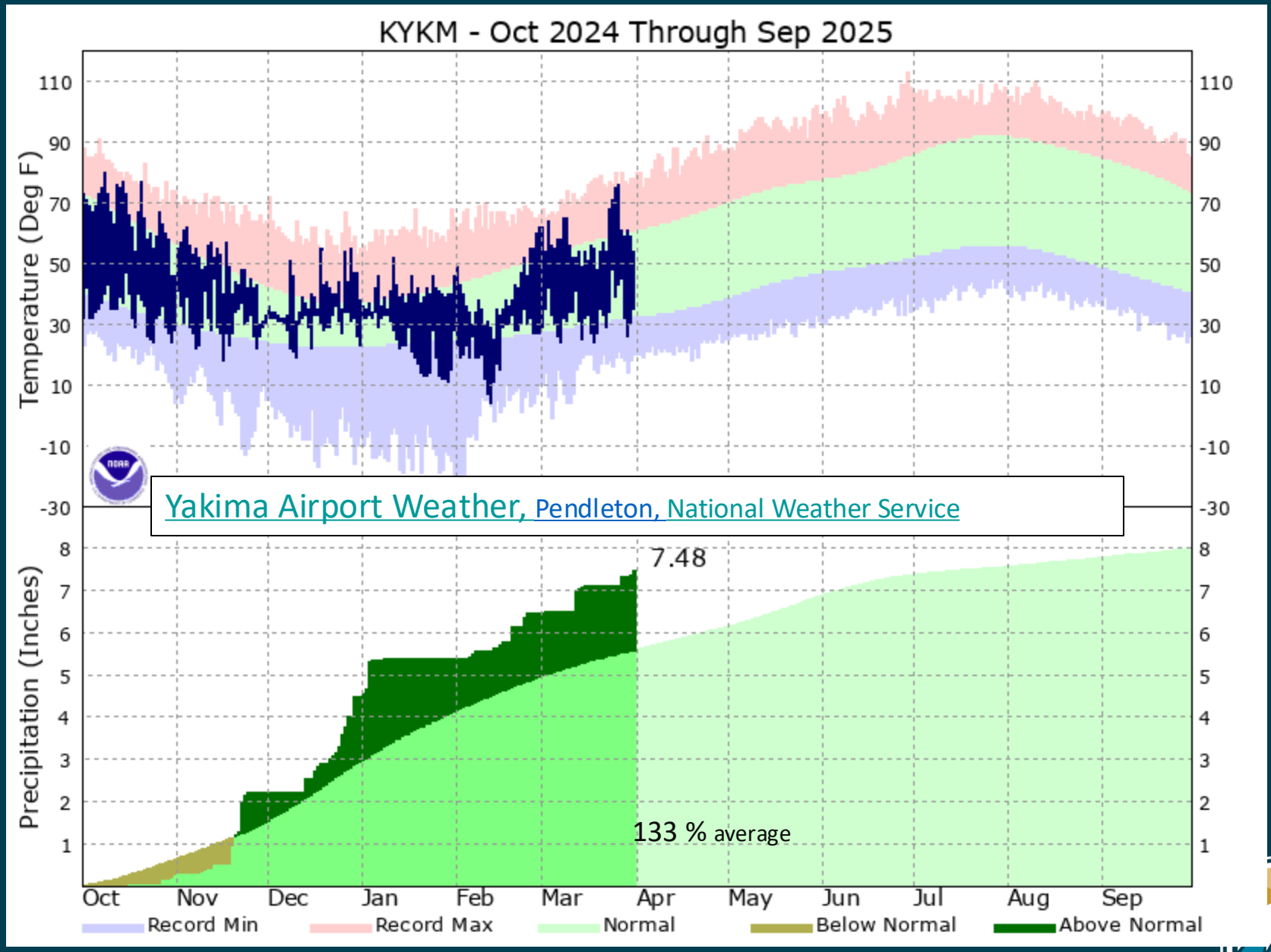
- Averaged statewide, water year temperatures and precipitation have been near-normal
  - Regional variations: water year precipitation has been below normal for western WA, including the Cascade Mountains
  - Third consecutive year of below normal Oct-Mar precipitation in Cascade Mountain West
- March was wet for most of the state with dynamic snow situation
- Farewell, La Niña!
- There aren't any indications of a late season snow bail out and the forecast for warmer than normal May temperatures could indicate an early meltout

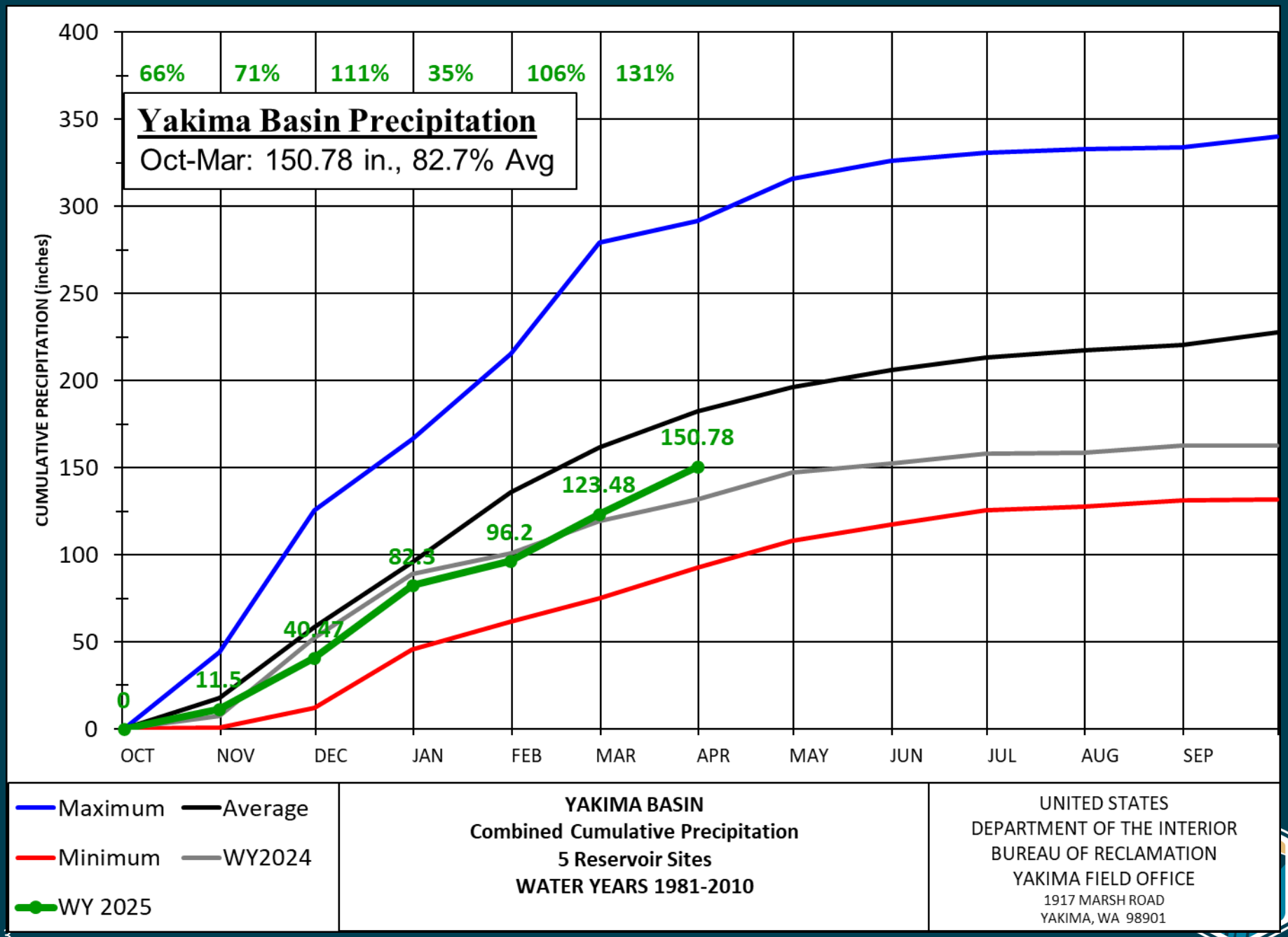
BUREAU OF RECLAMATION

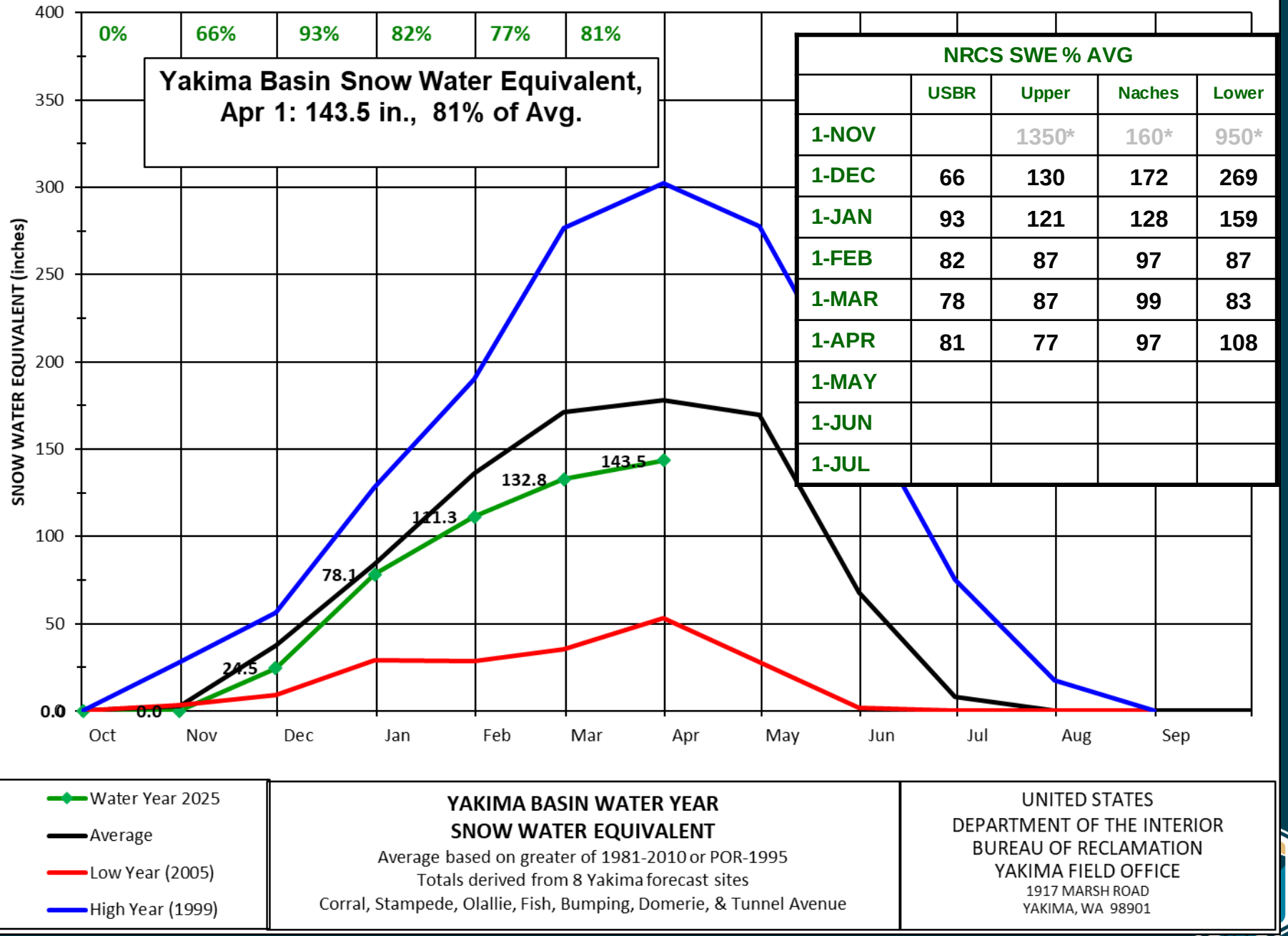
Yakima River Operations & Water Supply

Yakima Basin, Washington

April 2025, WY 2025

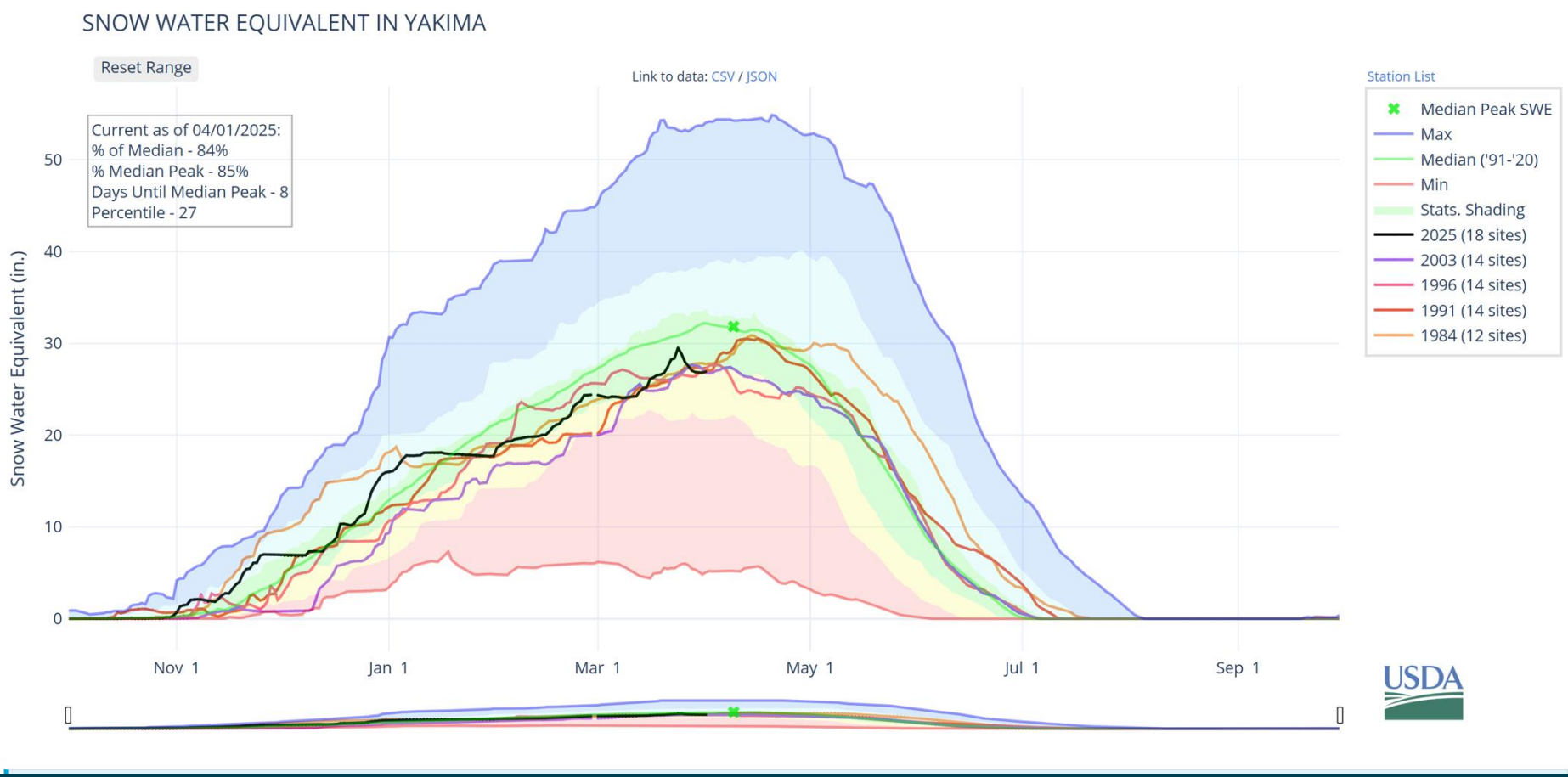

KYKM - Oct 2024 Through Sep 2025
Temperature (Deg F)
110
90
70
50
30
10
-10
-30
Yakima Airport Weather, Pendleton, National Weather Service
Precipitation (Inches)
8
7
6
5
4
3
2
1
7.48
133 % average
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Record Min
Record Max
Normal
Below Normal
Above Normal


66%
71%
111%
35%
106%
131%
Yakima Basin Precipitation
Oct-Mar: 150.78 in., 82.7% Avg
CUMULATIVE PRECIPITATION (inches)
400
350
300
250
200
150
100
50
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
0
11.5
40.47
82.3
96.2
123.48
150.78
Maximum
Average
Minimum
WY2024
WY 2025
YAKIMA BASIN
Combined Cumulative Precipitation
5 Reservoir Sites
WATER YEARS 1981-2010
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901

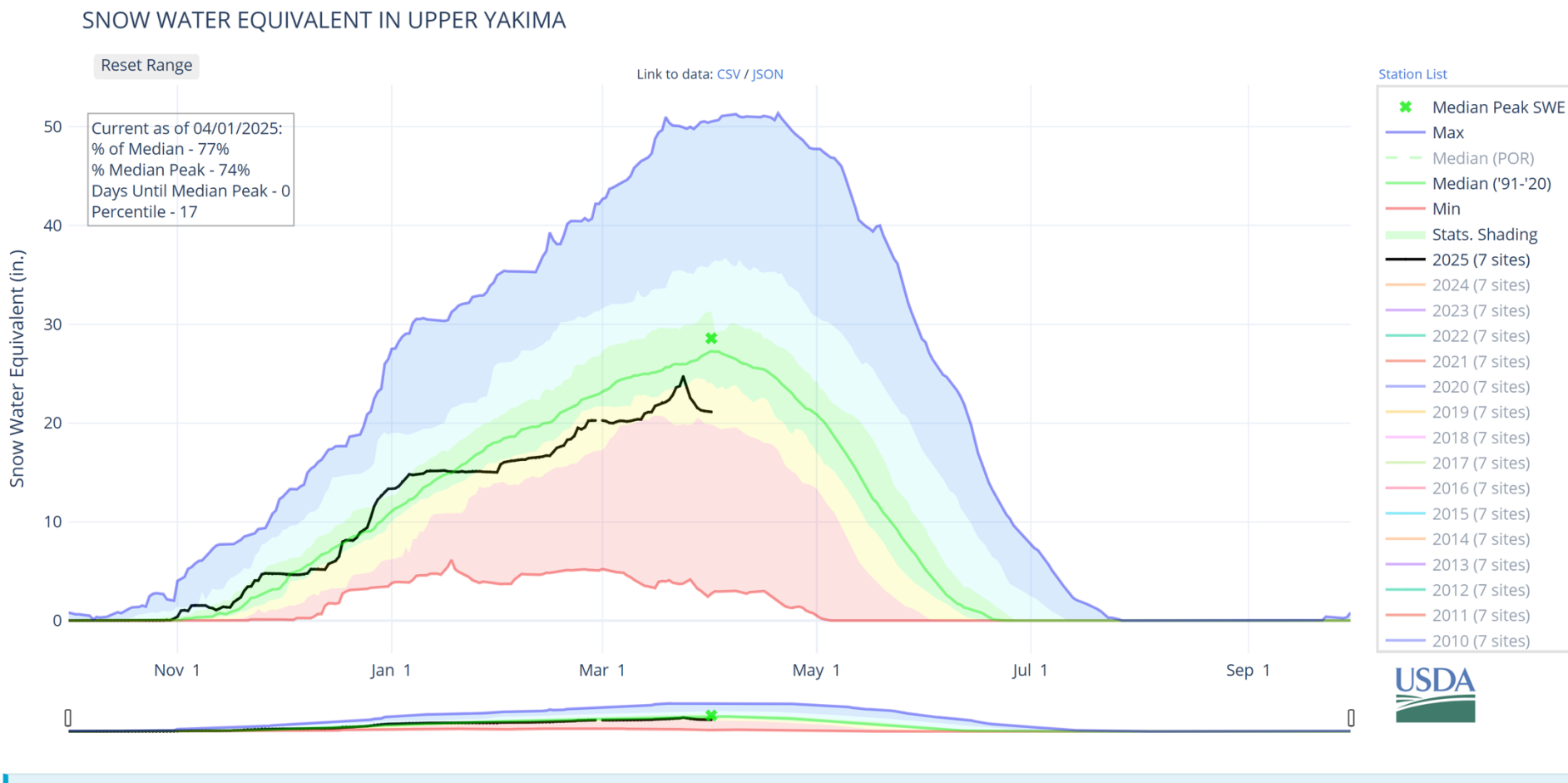


NRCS SWE % AVG				
	USBR	Upper	Naches	Lower
1-NOV		1350*	160*	950*
1-DEC	66	130	172	269
1-JAN	93	121	128	159
1-FEB	82	87	97	87
1-MAR	78	87	99	83
1-APR	81	77	97	108
1-MAY				
1-JUN				
1-JUL				

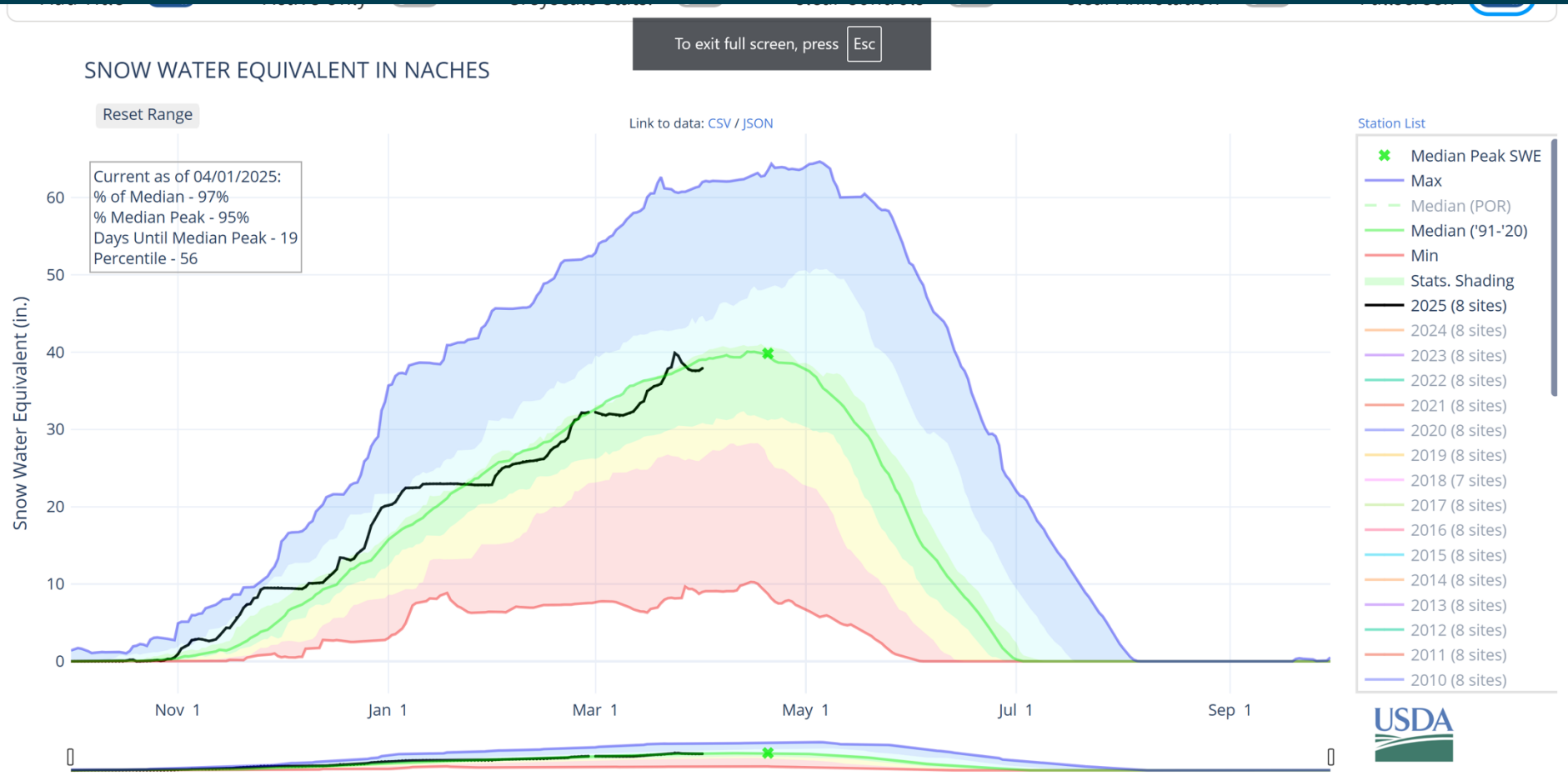
Yakima Basin SNOTEL

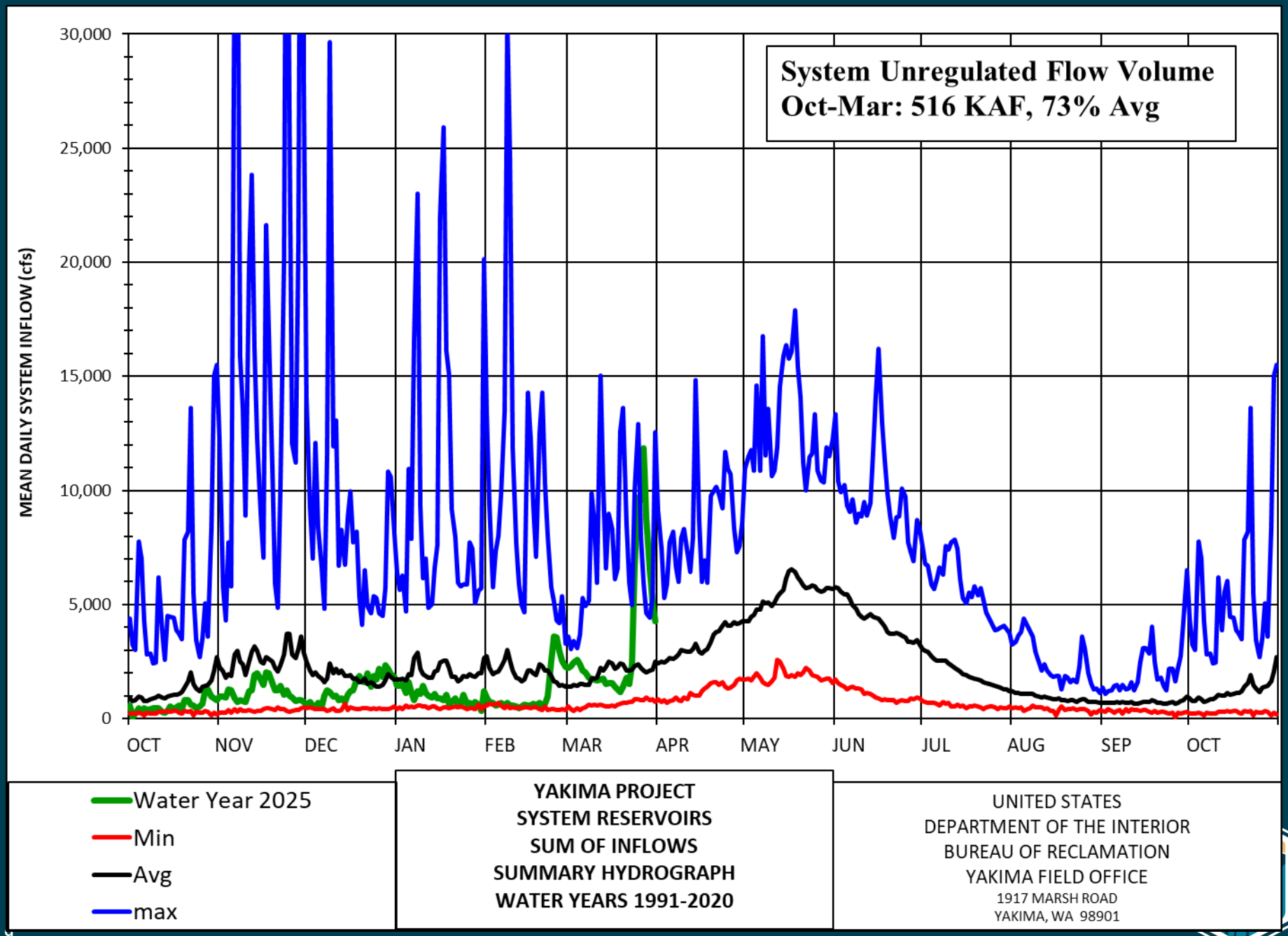


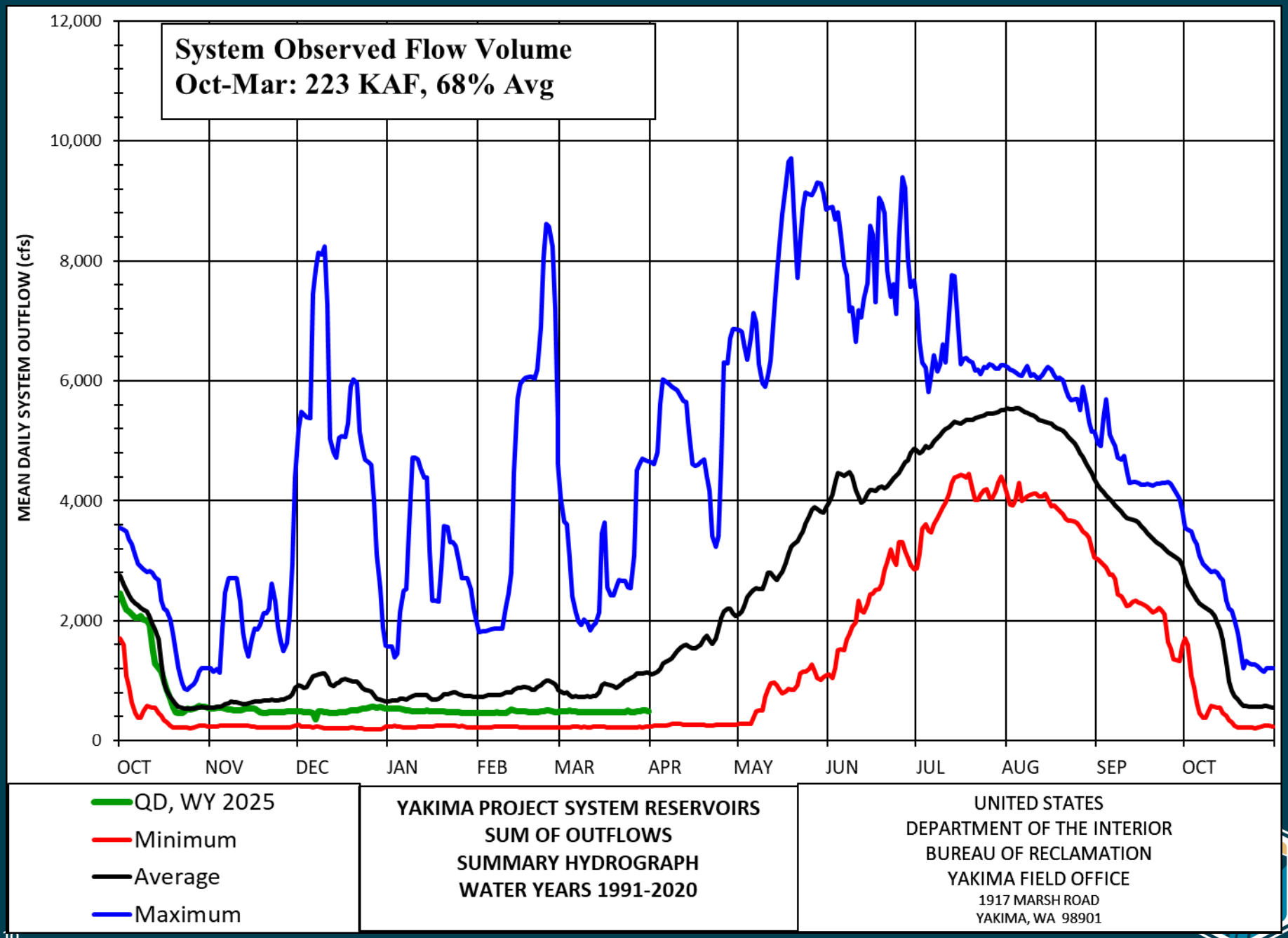
Upper Yakima Basin SNOTEL



Naches Basin SNOTEL




System Unregulated Flow Volume
Oct-Mar: 516 KAF, 73% Avg
MEAN DAILY SYSTEM INFLOW (cfs)
30,000
25,000
20,000
15,000
10,000
5,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Water Year 2025
Min
Avg
max
YAKIMA PROJECT
SYSTEM RESERVOIRS
SUM OF INFLOWS
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


System Observed Flow Volume
Oct-Mar: 223 KAF, 68% Avg
MEAN DAILY SYSTEM OUTFLOW (cfs)
12,000
10,000
8,000
6,000
4,000
2,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
QD, WY 2025
Minimum
Average
Maximum
YAKIMA PROJECT SYSTEM RESERVOIRS
SUM OF OUTFLOWS
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
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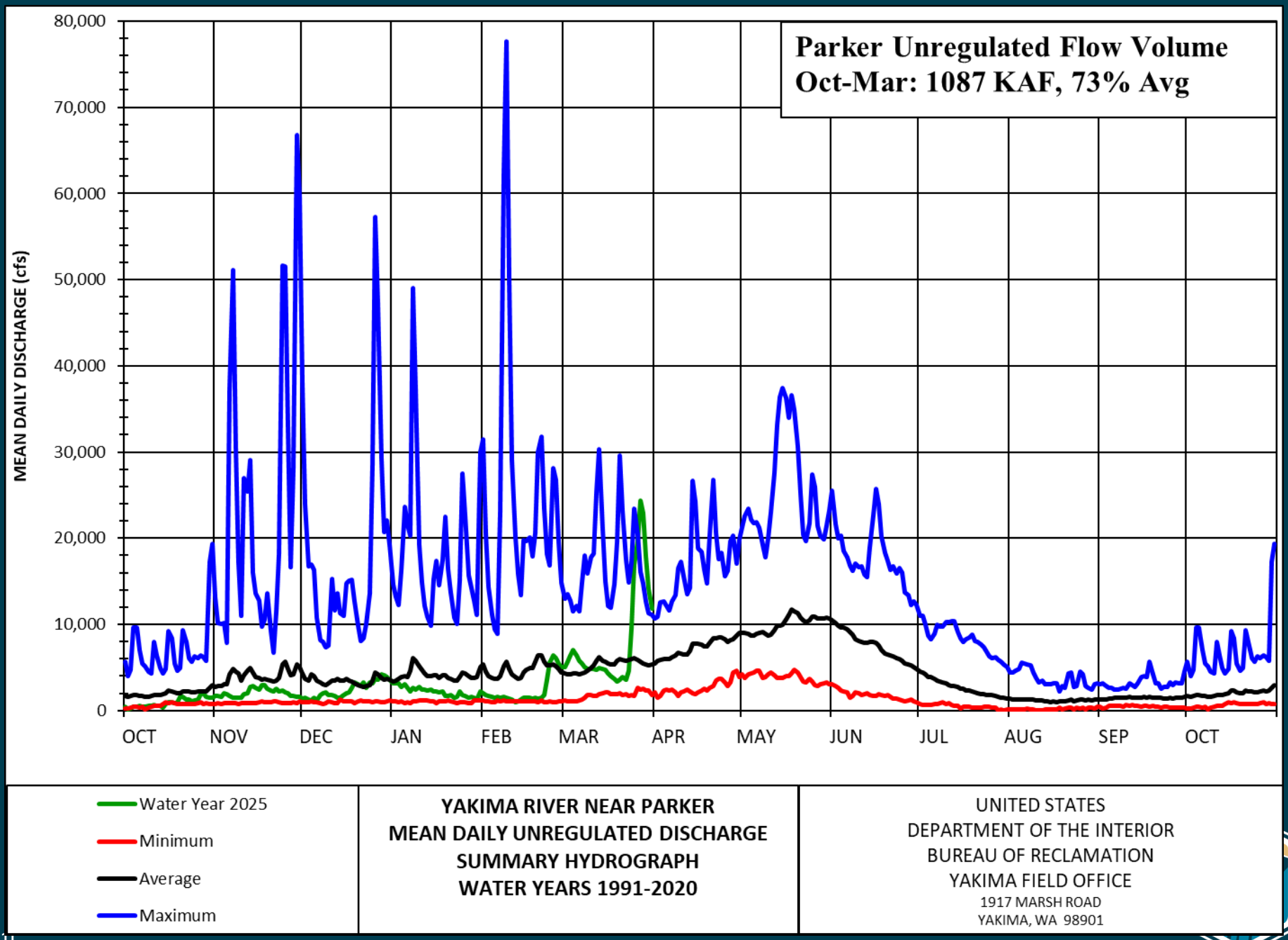
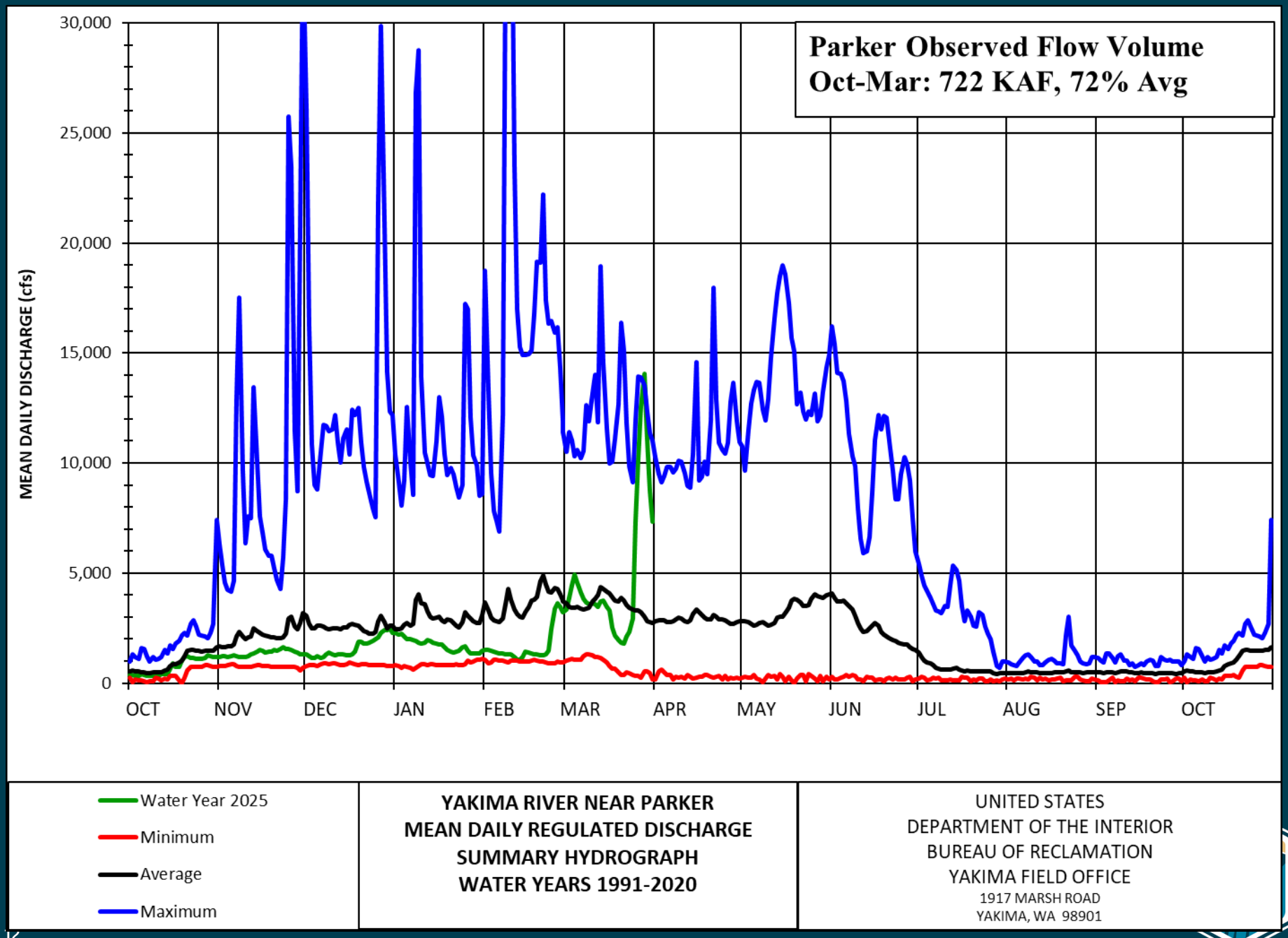
YAKIMA, WA 98901


Parker Unregulated Flow Volume
Oct-Mar: 1087 KAF, 73% Avg
MEAN DAILY DISCHARGE (cfs)
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Water Year 2025
Minimum
Average
Maximum
YAKIMA RIVER NEAR PARKER
MEAN DAILY UNREGULATED DISCHARGE
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


Parker Observed Flow Volume
Oct-Mar: 722 KAF, 72% Avg
MEAN DAILY DISCHARGE (cfs)
30,000
25,000
20,000
15,000
10,000
5,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Water Year 2025
Minimum
Average
Maximum
YAKIMA RIVER NEAR PARKER
MEAN DAILY REGULATED DISCHARGE
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
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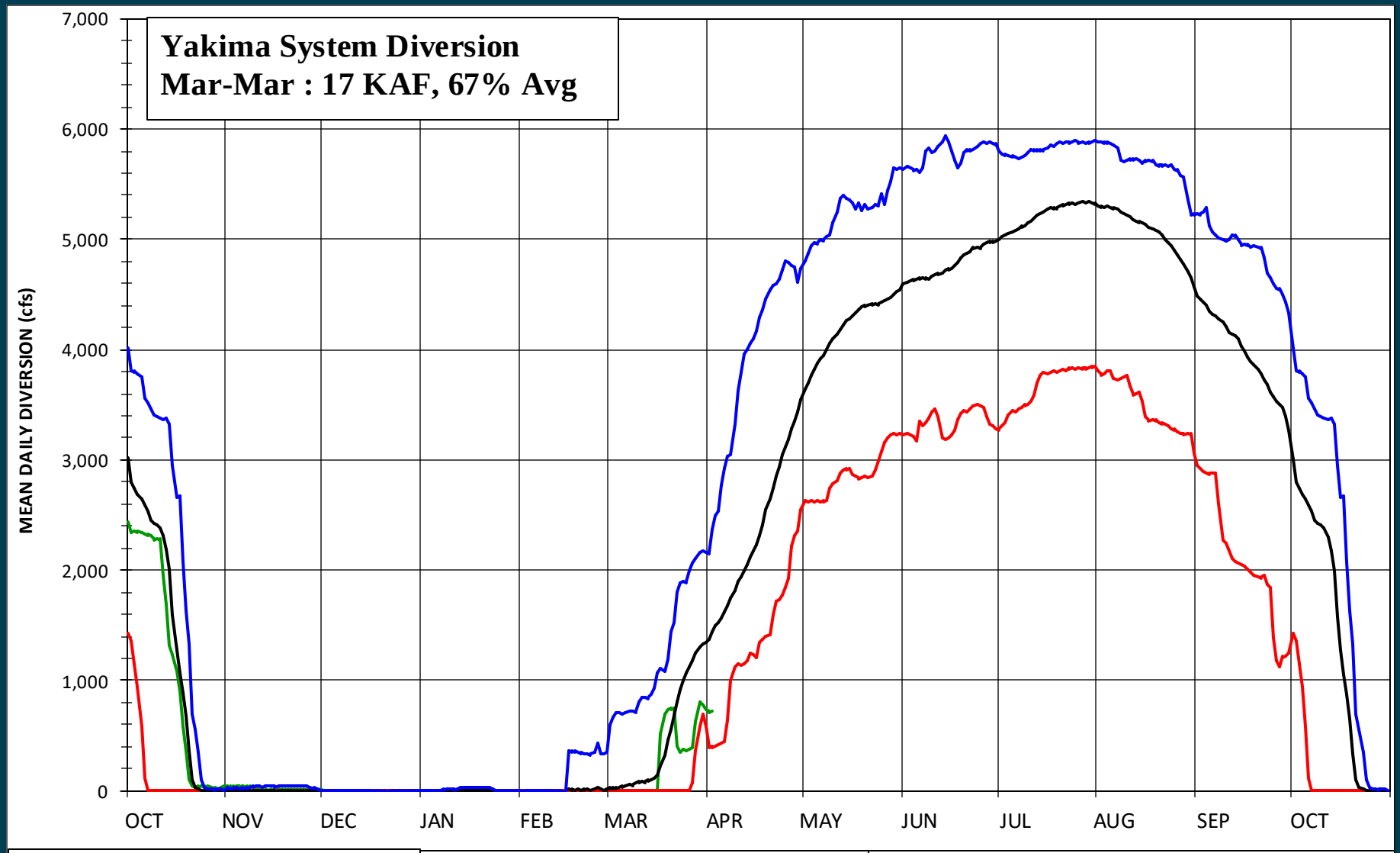
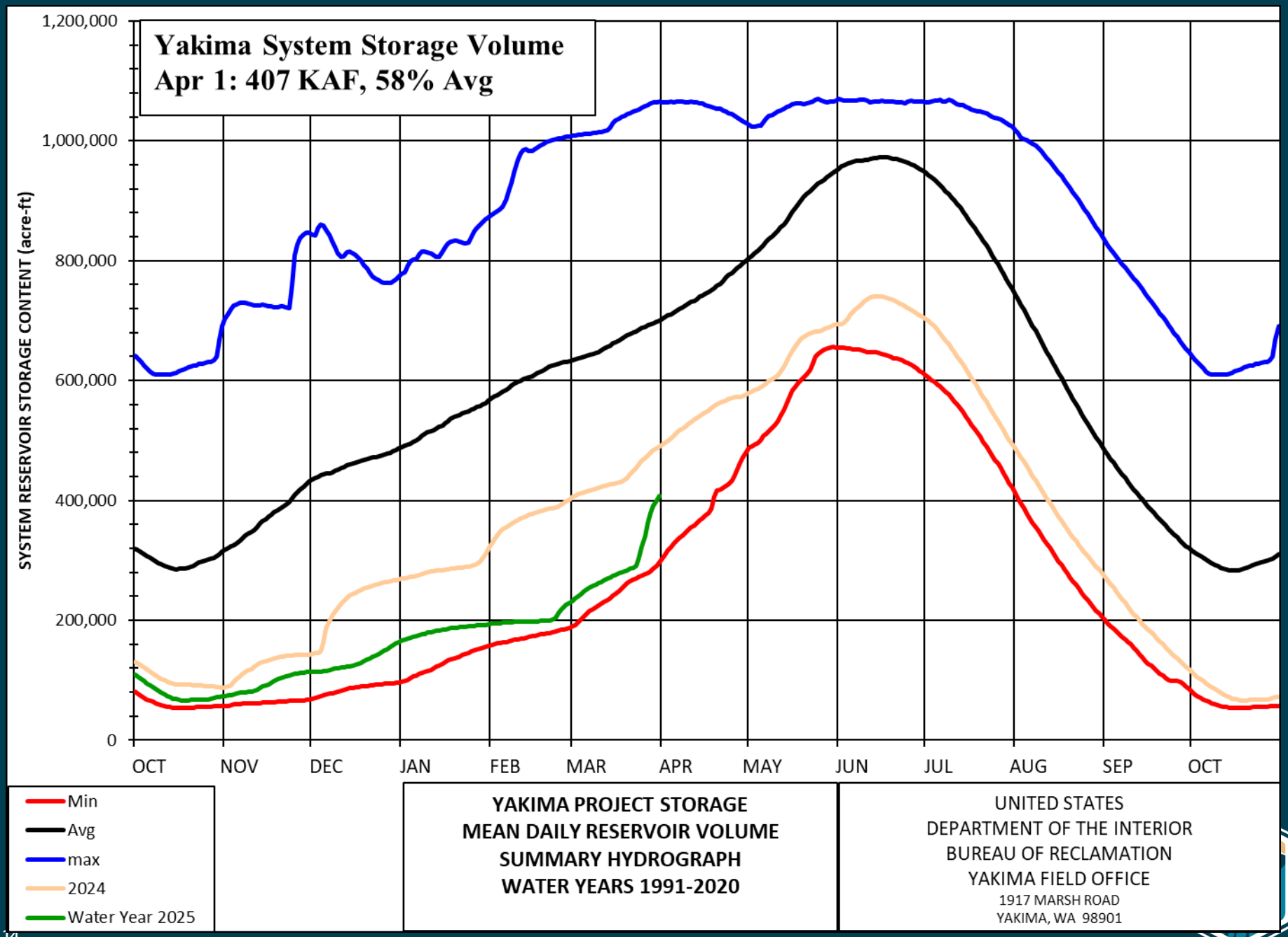
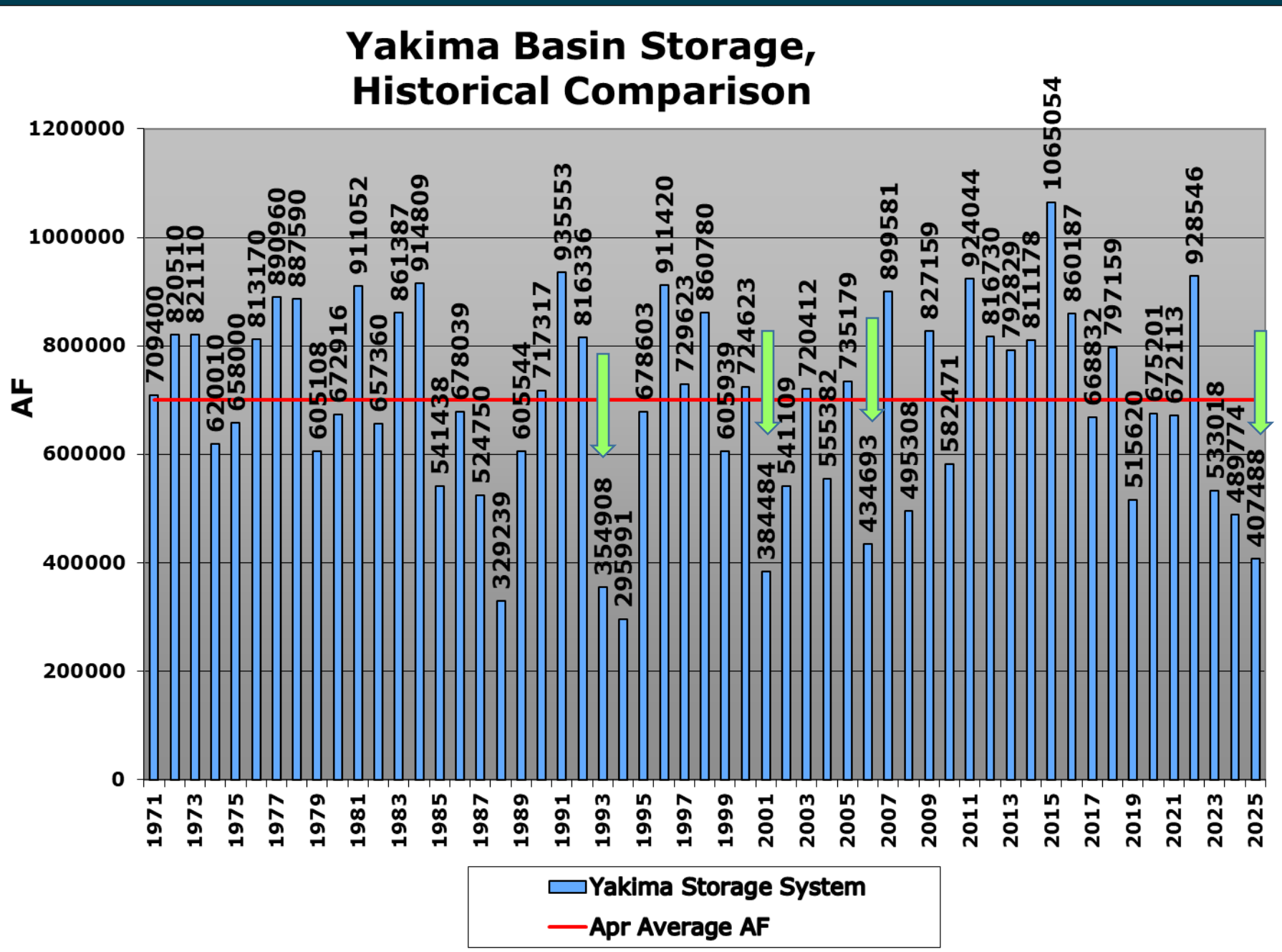


5 MAJOR IRRIGATION DIVERSIONS
YAKIMA R. ABOVE PARKER
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


Yakima System Storage Volume
Apr 1: 407 KAF, 58% Avg
SYSTEM RESERVOIR STORAGE CONTENT (acre-ft)
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Min
Avg
max
2024
Water Year 2025
YAKIMA PROJECT STORAGE
MEAN DAILY RESERVOIR VOLUME
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


Yakima Basin Storage,
Historical Comparison
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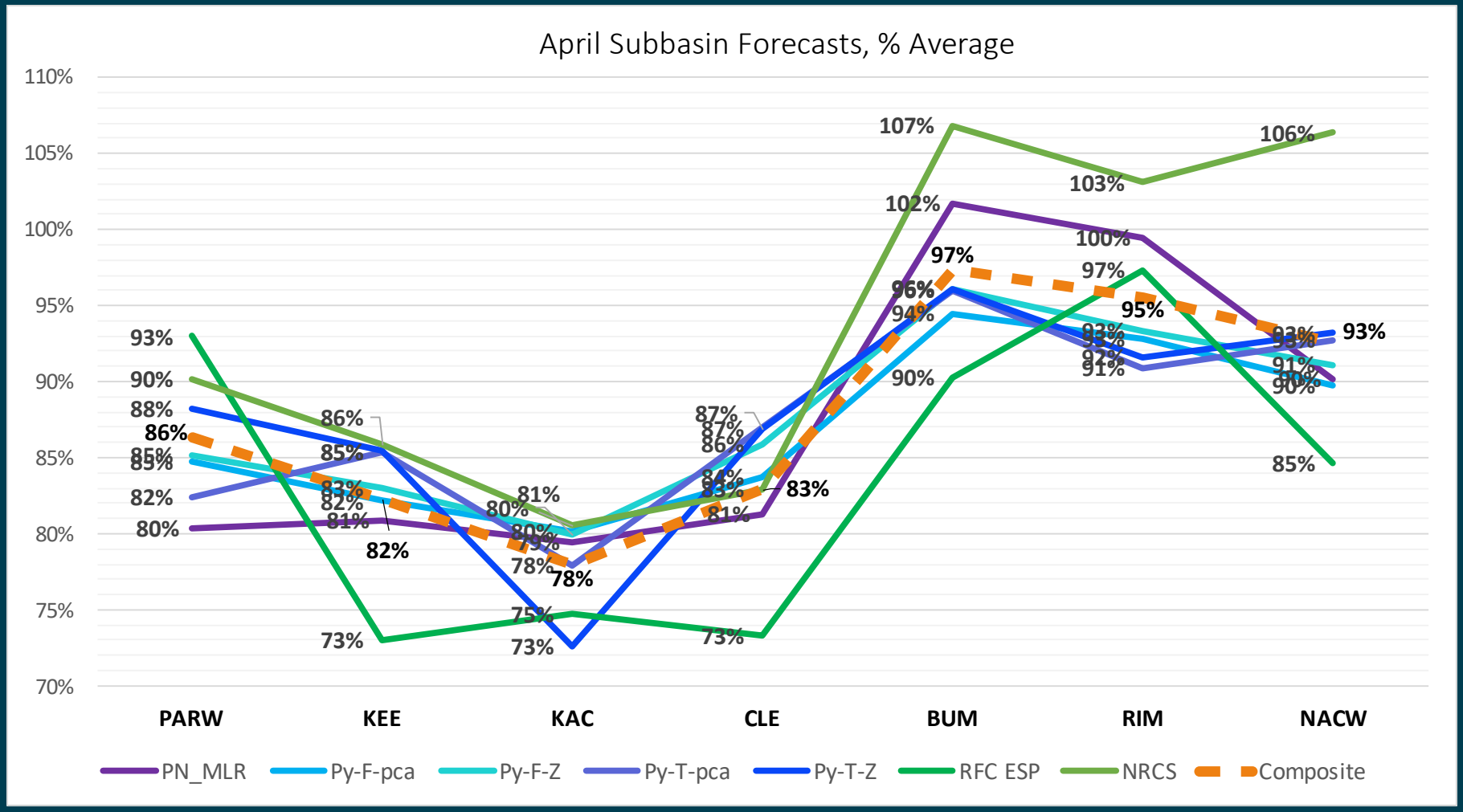
2025
Yakima Storage System
Apr Average AF

Yakima Subbasin forecasts, WY25



Yakima Subbasin forecasts, WY25

Yakima Basin Forecast Apr-Jul 2025 (KAF) (% of 30-year Ave)						
4/1/2025	Low	Composite	High	Low	Composite	High
PARW	1,192	1,474	1,888	70%	86%	111%
KEE	77	98	128	65%	82%	108%
KAC	66	81	104	63%	78%	100%
CLE	249	320	394	65%	83%	102%
BUM	96	112	142	84%	97%	123%
RIM	153	182	218	80%	95%	115%
NACW	579	683	848	79%	93%	115%

April 1, 2025 TWSA ESTIMATE

April 1 - September 30

Parameter*	+/-/=	Low	Adopted	High
Apr 1-Sep 30 Natural Flow at Parker est.	+	1250	1567	2041
Return Flow Estimate, est	+	285	310	350
April 1, Reservoir Content, est	+	407	407	407
TWSA	=	**1942**	**2284**	**2798**
SEP 30 EST RESERVOIR CONTENT	-	76	76	76
FLOW OVER SUNNYSIDE DAM	-	310	415	680
TWSA FOR IRRIGATION	=	1557	1794	2042
NONPRORATABLE ENTITLEMENT	-	1070	1070	1070
YRPW-KID release		11	8	0
REMAINING TWSA	=	476	716	972
PRORATABLE ENTITLEMENT		1239	1239	1239
% RATIO= REMAINING TWSA/PRORATABLE ENTITLEMENT		**38%**	**58%**	**78%**
TITLE XII FLOW TARGET, cfs	**April**	**300**	**300**	**400**
Added flow available, cfs *#*		122	128	145
Non-storeable Portion of added flow, cfs		11	11	11
Storable portion of added flow, cfs		111	117	134
BA May Pulse Flow Volume		Low-BA	Low-BA	Mid-BA

*Values are in 1,000 ac-ft unless otherwise specified.

State & YRBWEP Trust, Acquisition, & Conservation additions to Title XII flow range from 122 to 145 cfs.

April 1, 2025 TWSA Comparison

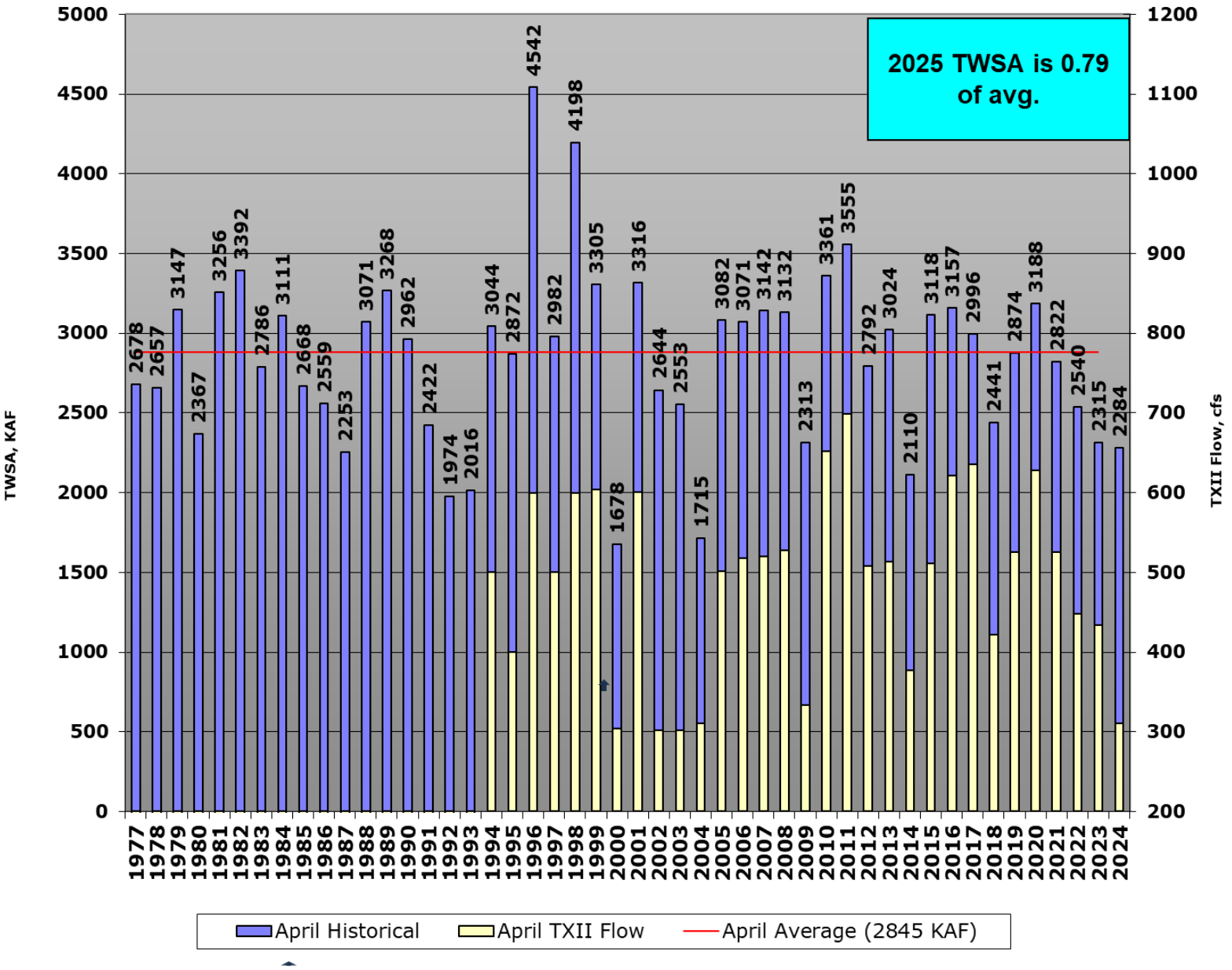
April 1 - September 30

Parameter	"+/-/="	Mar's 2025	Apr's 2025	Apr's 2024
Apr 1-Sep 30 Natural Flow at Parker est.	+	1450	1567	1502
Return Flow Estimate	+	270	310	320
April 1, Reservoir Content	+	304	407	493
TWSA	=	2025	2284	2315
SEP 30 EST RESERVOIR CONTENT*	-	76	76	76
FLOW OVER SUNNYSIDE DAM	-	283	415	390
TWSA FOR IRRIGATION	=	1666	1794	1849
NONPRORATABLE ENTITLEMENT	-	1070	1070	1070
REMAINING TWSA	=	596	716	779
PRORATABLE ENTITLEMENT		1239	1239	1239
% RATIO= REMAINING TWSA/PRORATABLE ENTITLEMENT		48%	58%	63%
TITLE XII FLOW REQUIREMENTS, cfs	**April**	300	300	300
TOTAL FLOW AVAILABLE AT PARKER, cfs *#*		425	428	434

*Values are in 1,000 ac-ft unless otherwise specified.

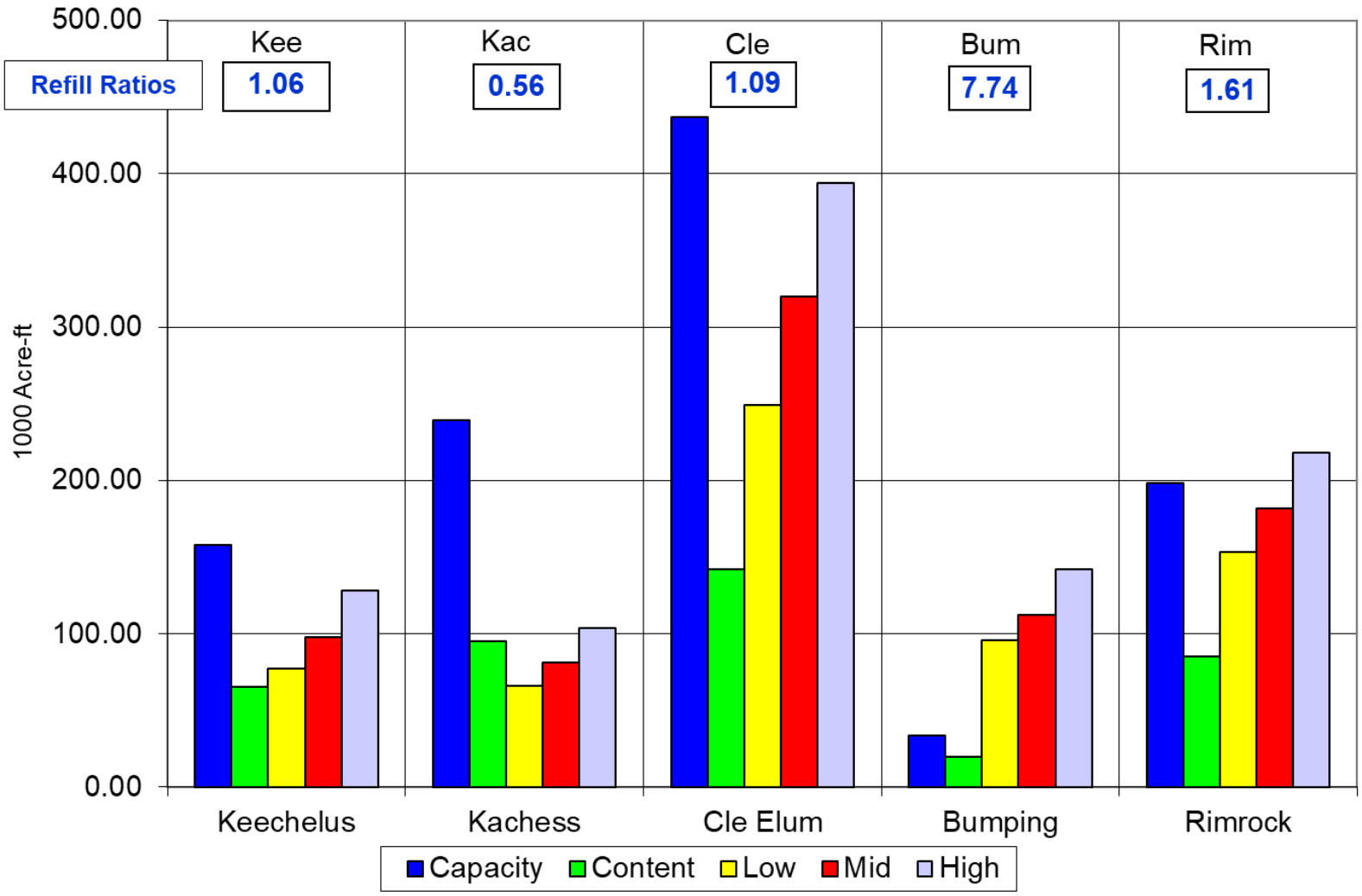
State & YRBWEP Trust, Acquisition, & Conservation additions to Title XII flow.

Yakima Basin Historical TWSA's



April 2025

Yakima Project Runoff Forecast to Reservoir Space Available



Yakima Basin Flows

Minimum Flow Targets, WY2025

Location	Target Flow (cfs)
Keechelus (KEE)	80
Kachess	10 (normally 30)
Easton (EASW)	190
Cle Elum (CLE)	180
Tieton River (TICW)	75
Rimrock	50
Bumping (BUM)	130 (range: inflow to 130+)

YRPW subordination is 1000 cfs
RBDW subordination 1300 cfs

(YRPW: 1000 Apr-Jun, TXII+add+35 or 450, 800 Oct-Nov, 600 Dec-Mar)
(RBDW: 1300 Apr-May, 500 Jun-Oct, 500 Oct-Mar,)

Yakima Basin Outmigration Flows (BA Pulse Flows)

Table 2-14. Minimum volume of water (acre-feet) that will be available in April and May during years when water prorationing levels are equal to or greater than 70% to provide outmigration flows. Outmigration flows are measured at Tieton Dam (RIM), Cle Elum Dam (CLE), and Yakima River at Easton gage (EASW).

	Monthly Min. acre-feet for Outmigration Flows		
April TWSA (MAF)	**< 2.36**	**2.36 - 3.13**	**> 3.13**
May TWSA (MAF)	**< 2.20**	**2.20 – 2.61**	**> 2.61**
RIM	4,500	8,400	14,800
CLE	4,200	9,900	18,800
EASW	3,700	4,800	9,900

Easton (EASW) can be met from unregulated local inflow below Kee and Kac.
RIM/NACW can be met from spill at BUM.

Hydrologic Summary

- Storage is 5th lowest in POR from 1971-2025, 407 KAF, 38% full, 58.2% avg.
- March precip, 131% avg.
- WYTD precip, 83% avg.
- Adopted Runoff forecasts are near 86% avg.
- TWSA is 2.284 MAF, 80% of normal
- Prorationing would be 58%
- Low refill probabilities but likely at BUM.
- BA Pulse Flows are in the Low Range

USGS
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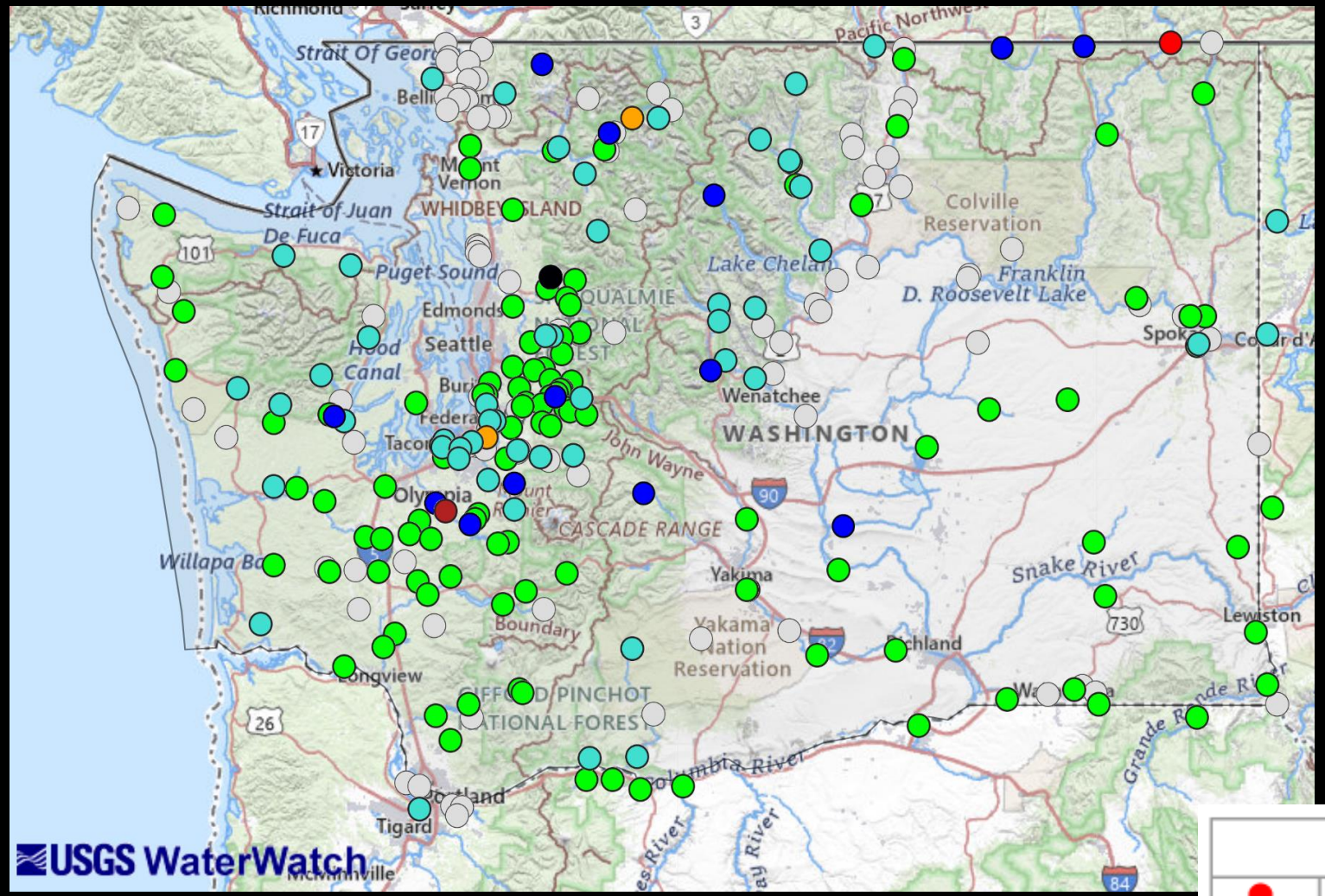
Streamflow & Groundwater Conditions in Washington State as of 8 April 2025

Presented on 10 April 2025
to the Washington Water Supply Availability Committee

by Nicholas Sutfin,
nsutfin@usgs.gov
USGS Washington Water Science Center

7-day Average Streamflow

Conditions as of 8 April 2025



Preliminary Information- Subject to Revision. Not for Citation or Distribution.

WaterWatch is scheduled to be discontinued in 2026

Explanation - Percentile classes							
Record Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	Record High	Not-ranked

https://waterwatch.usgs.gov/index.php?id=pa07d&sid=w__gmap&r=wa

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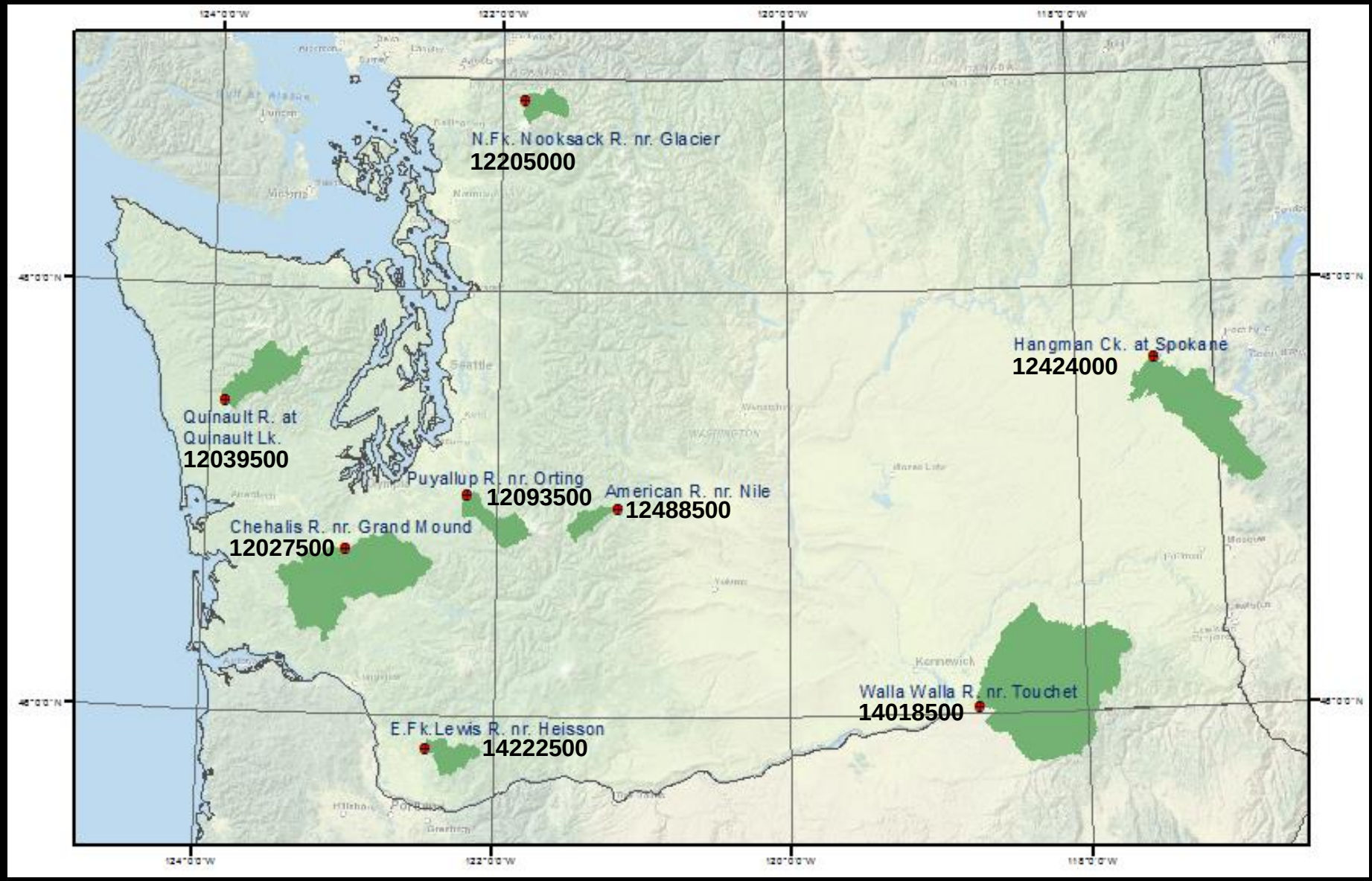
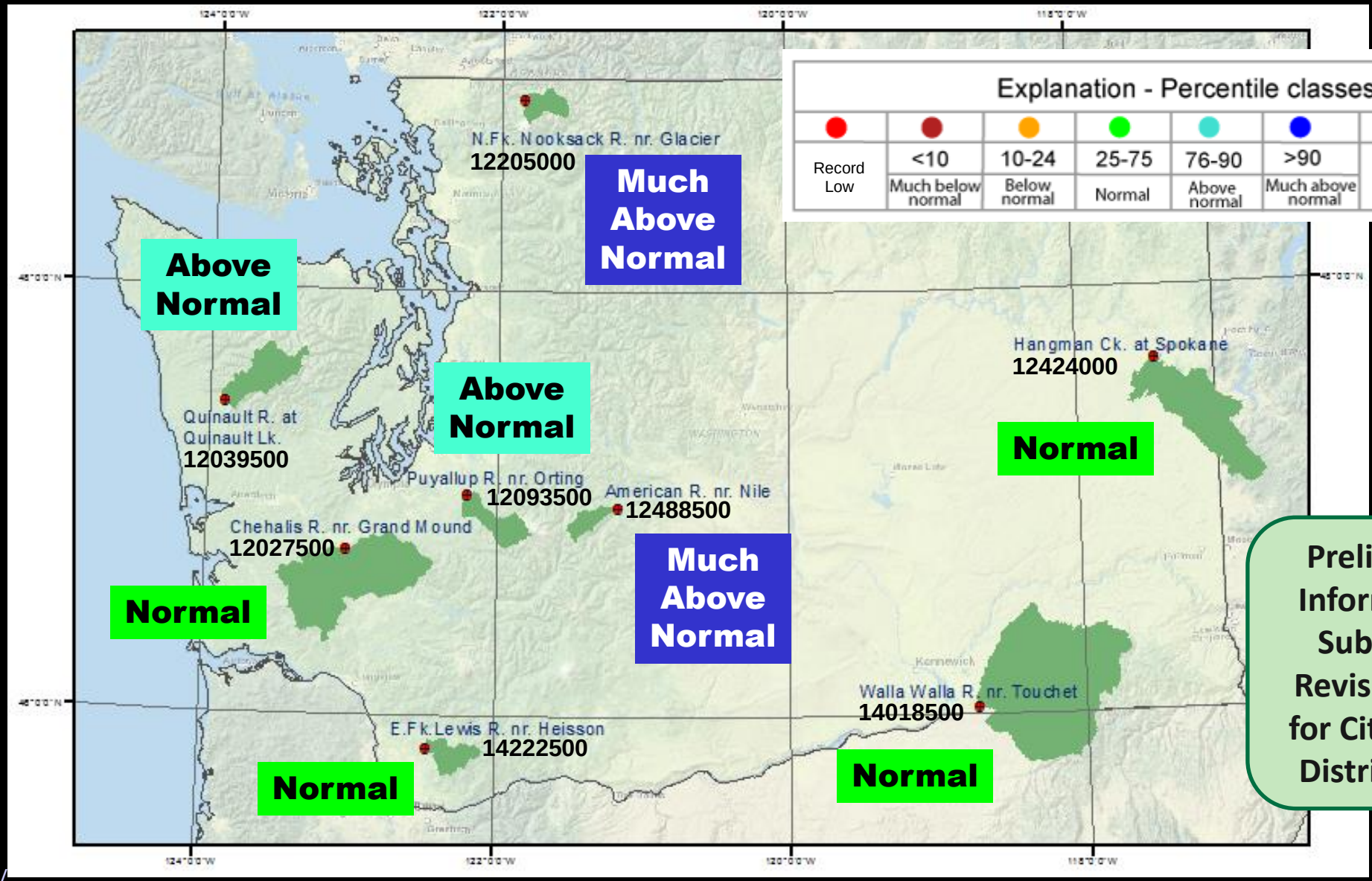
Index Gaging Stations

(Stations that measure natural or near-natural streamflow)



Index Gaging Stations

7-day average streamflow as of 8 April 2025

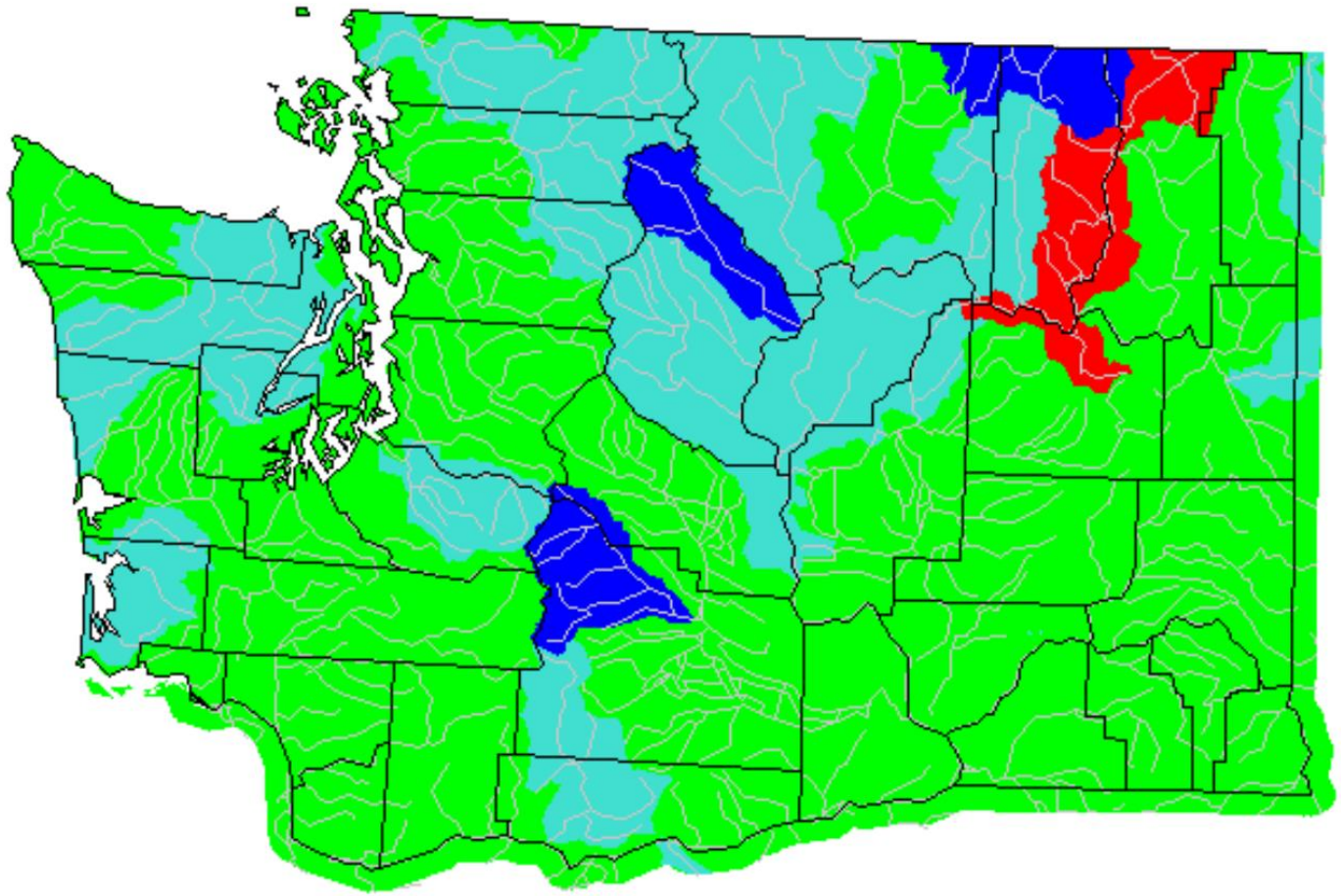


https://waterwatch.usgs.gov/

Average streamflow

compared to historical streamflow

7-day average as of 8 April 2025



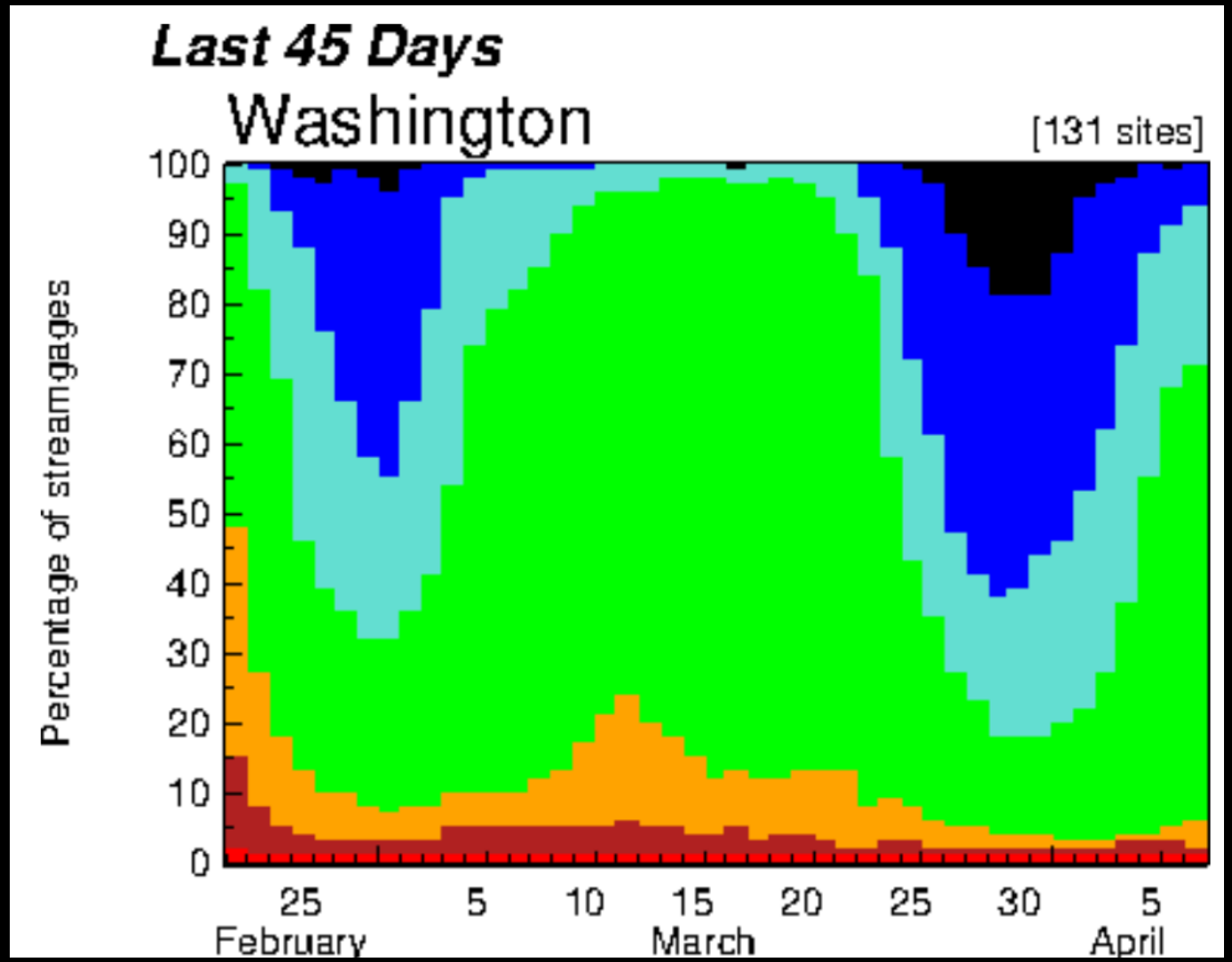
Explanation - Percentile classes						
Record Low	<10	10-24	25-75	76-90	>90	Record High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

https://waterwatch.usgs.gov/

7-day average streamflow

Most USGS stream gages at normal as of 8 April 2025



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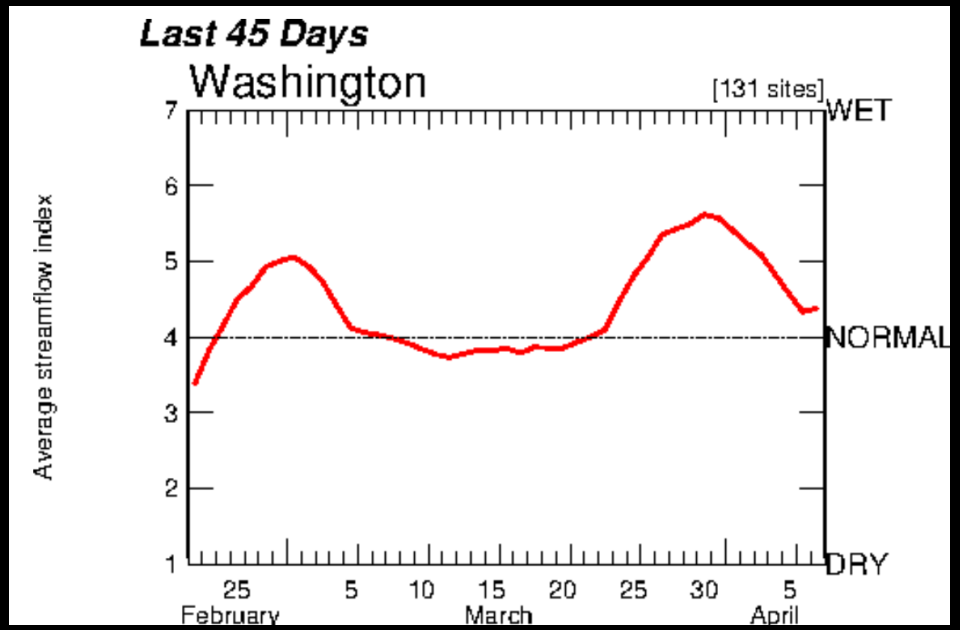
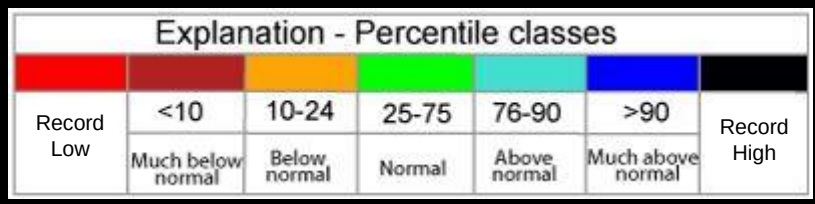
Not for Citation or Distribution.

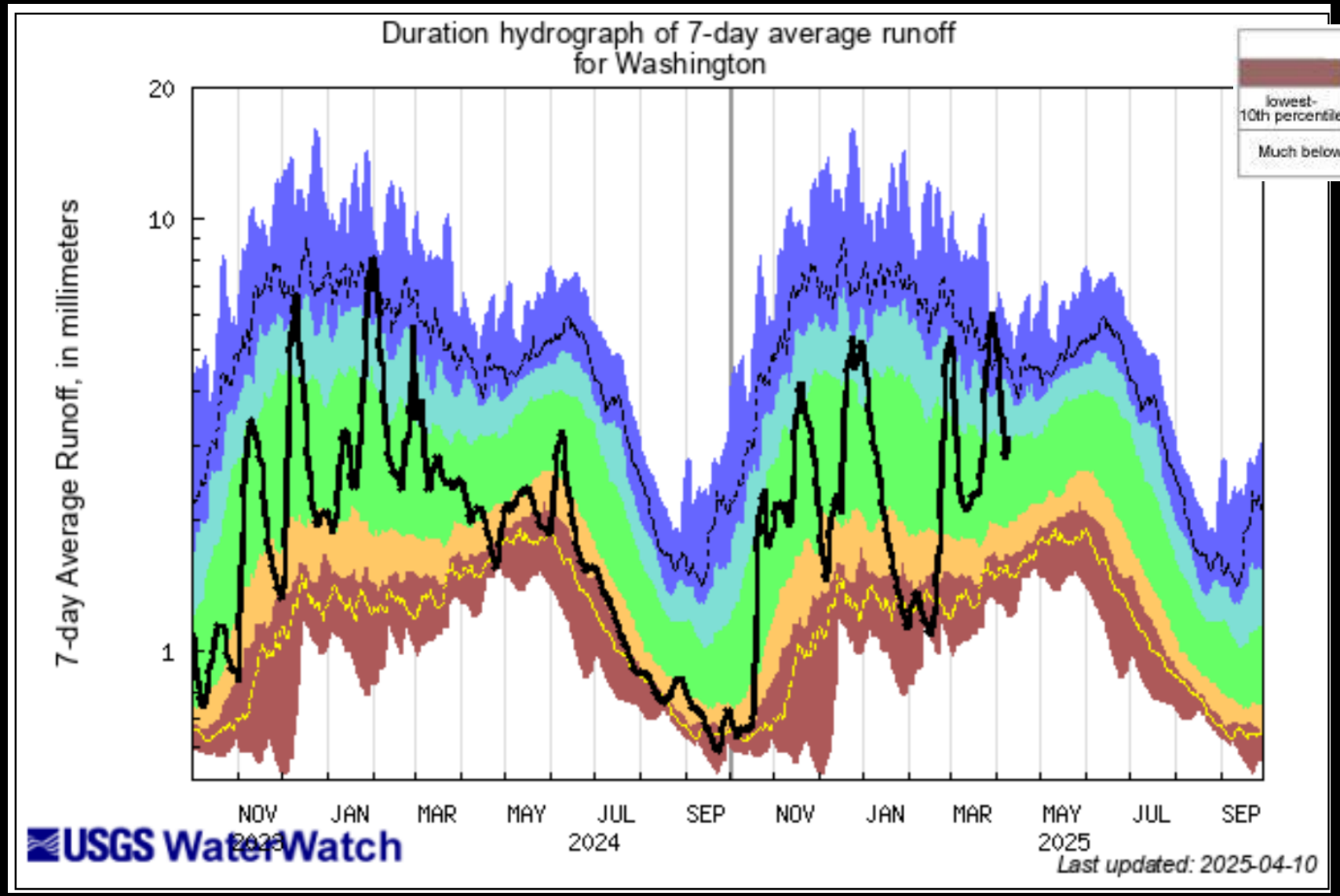


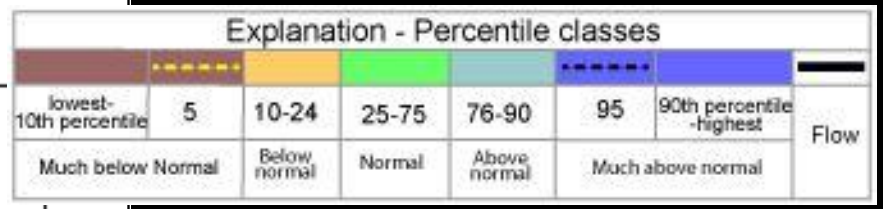


https://waterwatch.usgs.gov/

Area-Based Runoff Duration Hydrograph

7-day average streamflow





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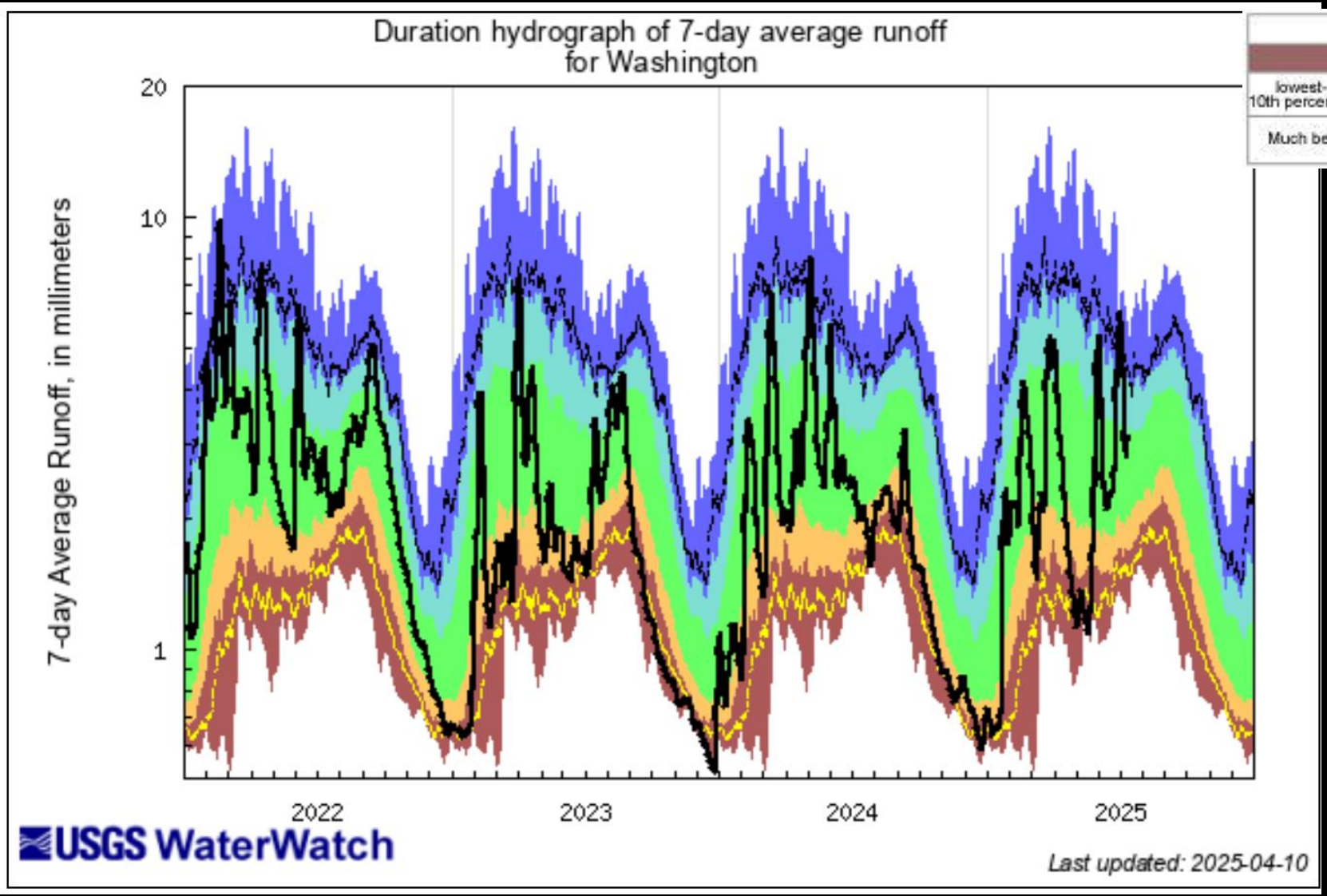
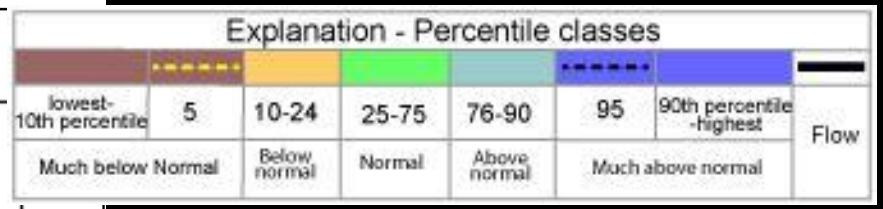
For some streams, flow statistics may have been computed from mixed regulated and unregulated flows; this can affect depictions of flow conditions.

https://waterwatch.usgs.gov/

Area-Based Runoff Duration Hydrograph

7-day average streamflow





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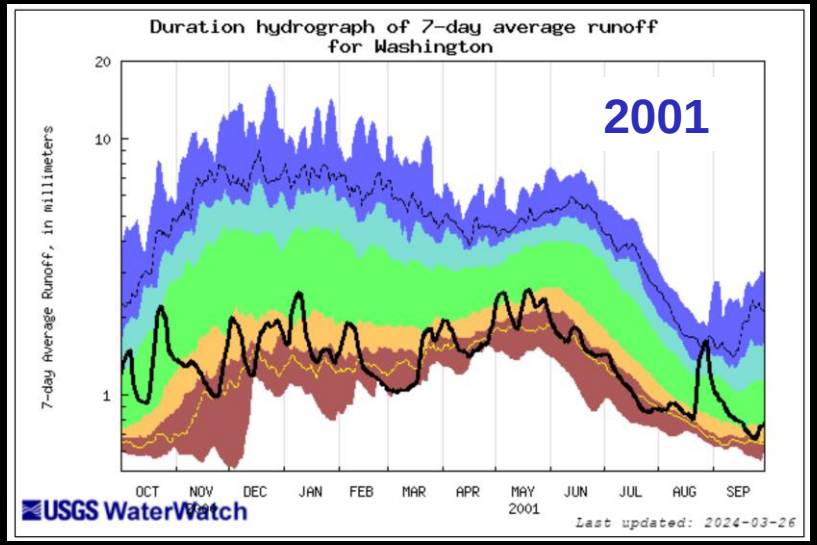
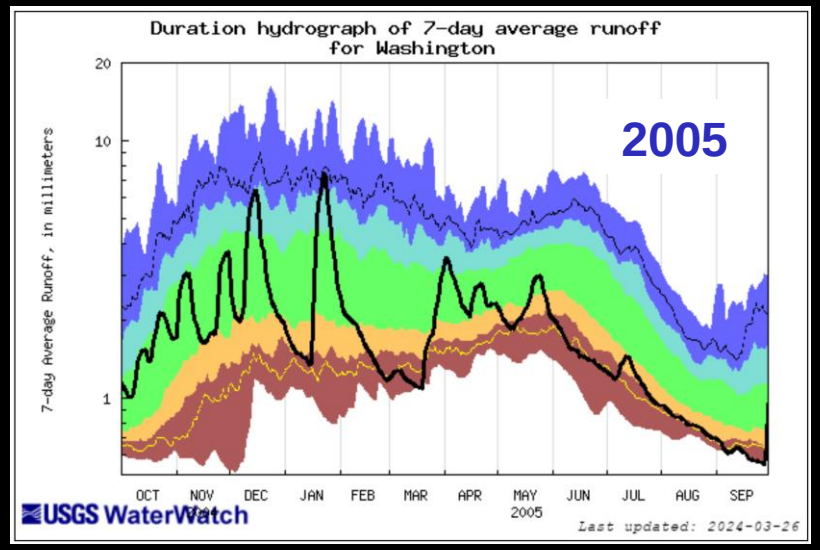
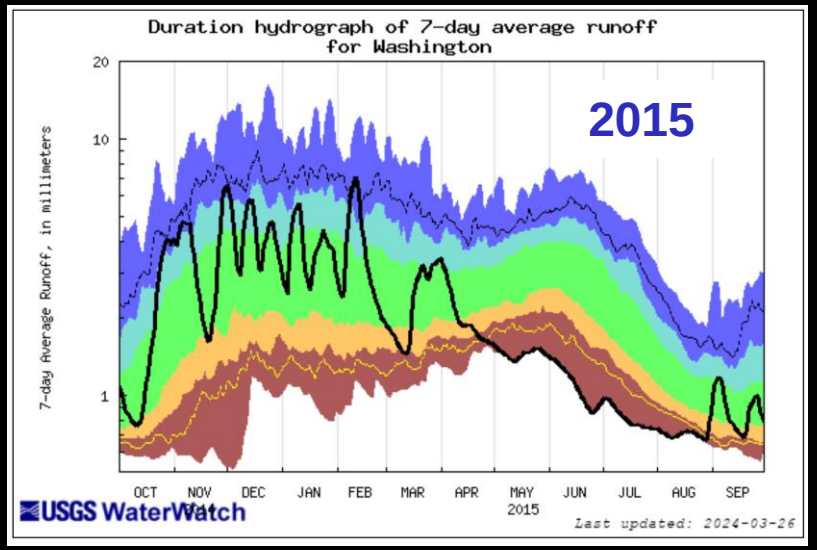
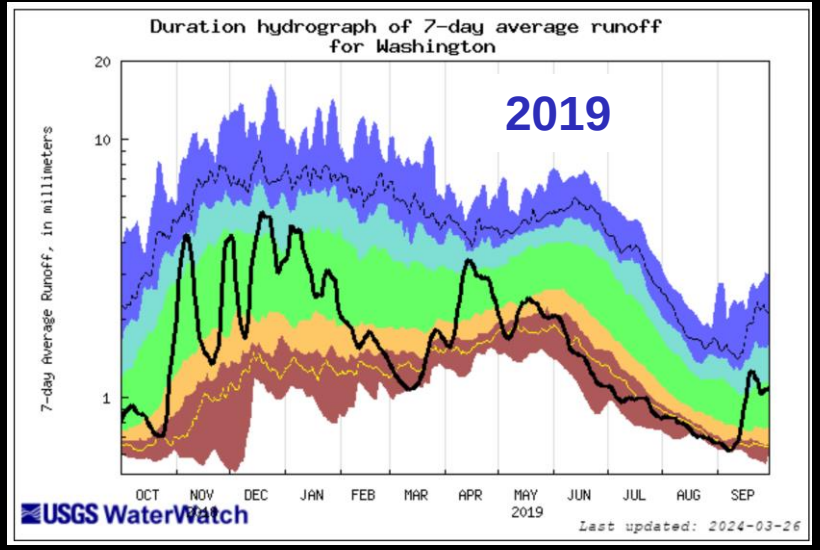
Area-Based Runoff Duration Hydrograph

7-day average streamflow

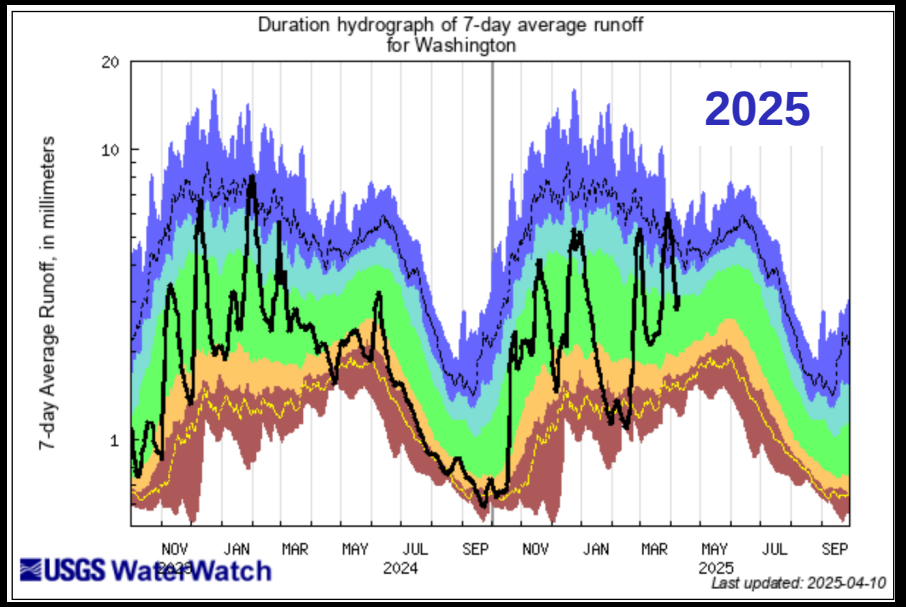


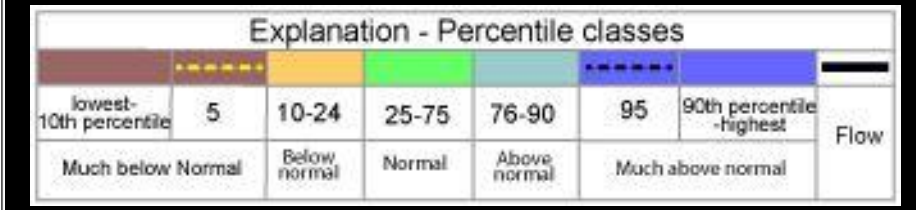






Duration hydrograph for the year compared to recent years of drought





Preliminary Information-Subject to Revision. Not for Citation or Distribution.

https://waterwatch.usgs.gov/

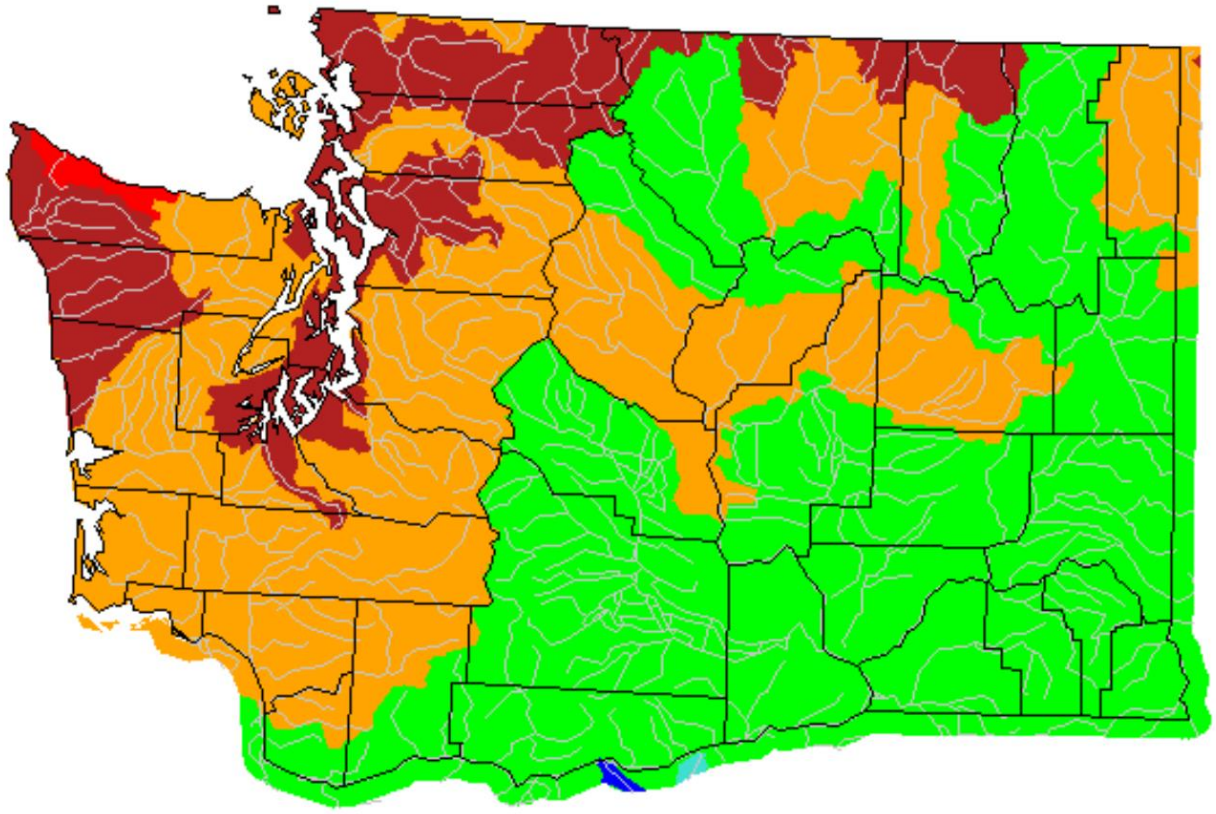
Monthly average streamflow

compared to historical streamflow

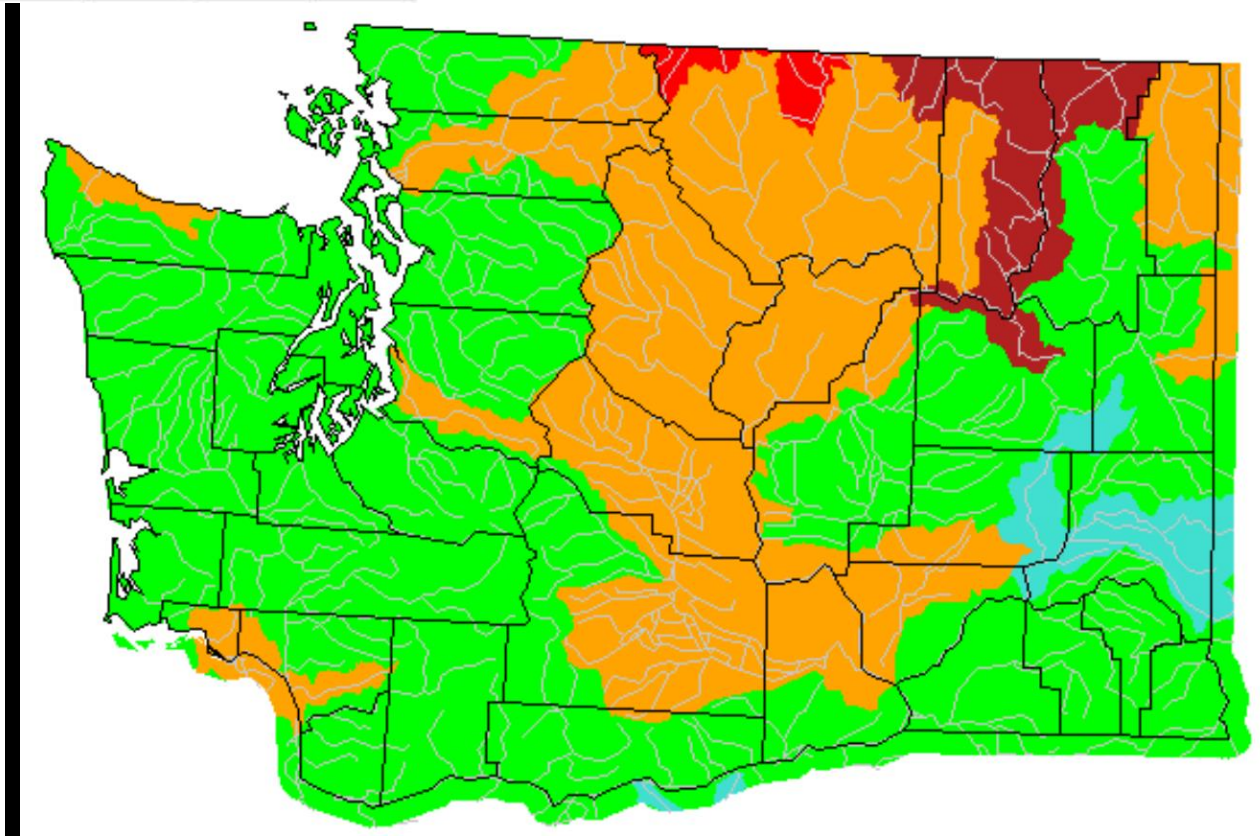
USGS science for a changing world

Explanation - Percentile classes						
Record Low	<10	10-24	25-75	76-90	>90	Record High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

January 2025



February 2025



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Monthly average streamflow

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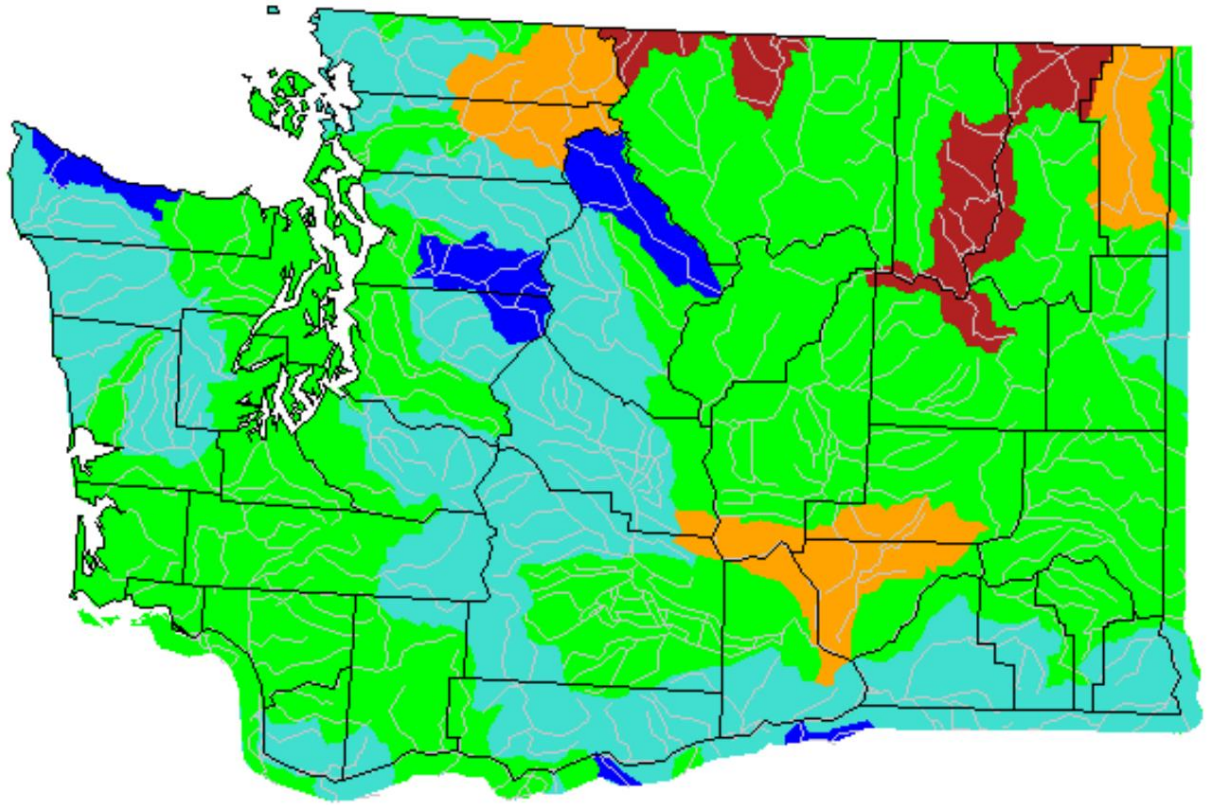
March 2025



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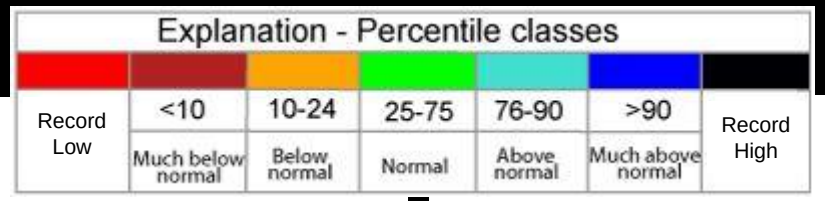
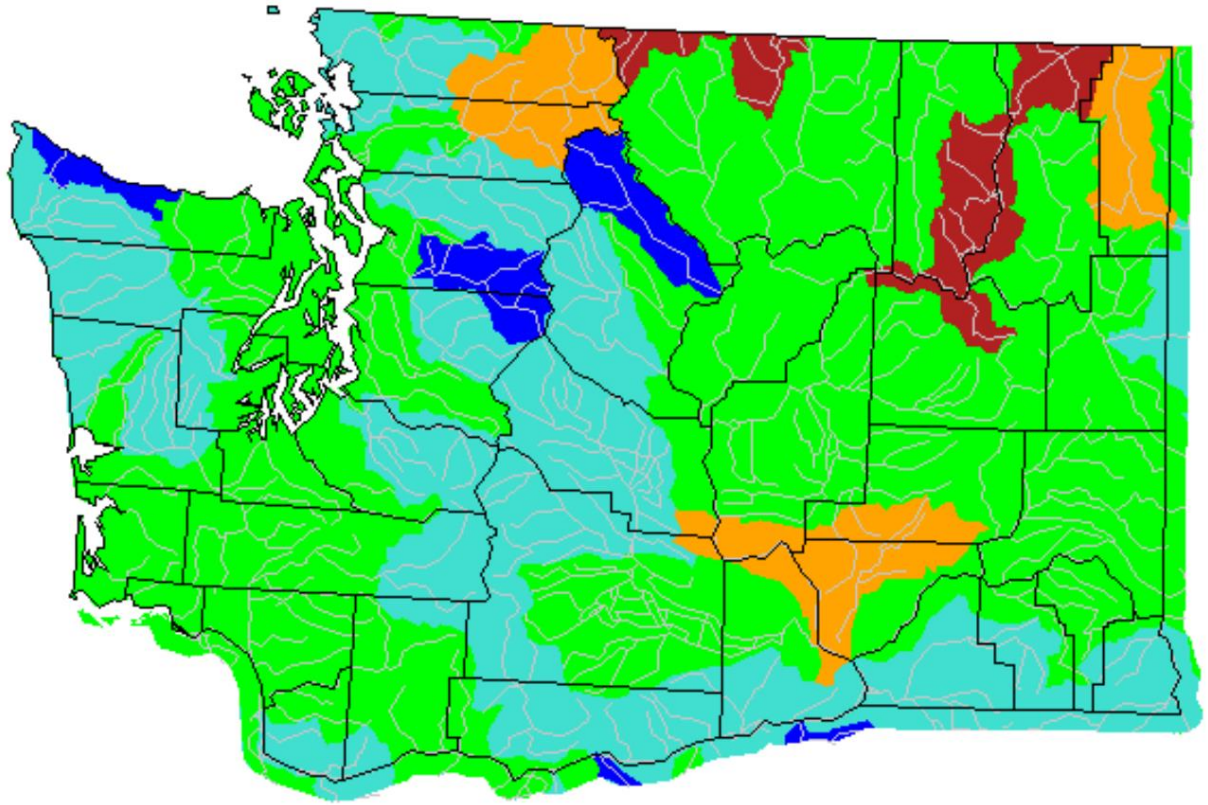
Monthly average streamflow

compared to historical streamflow

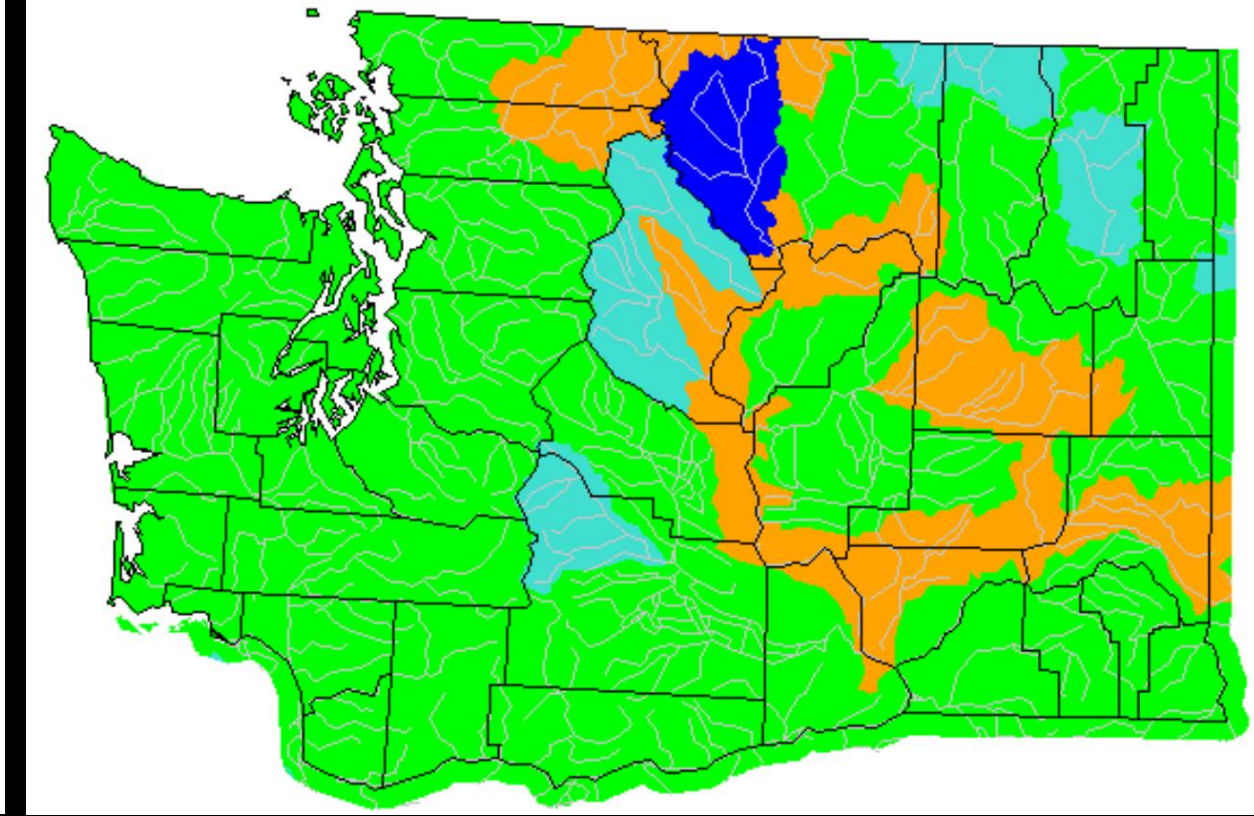
USGS science for a changing world



March 2025



March 2024



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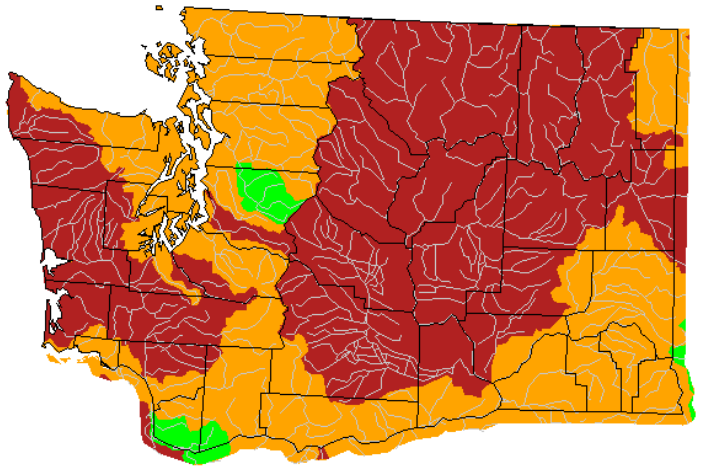
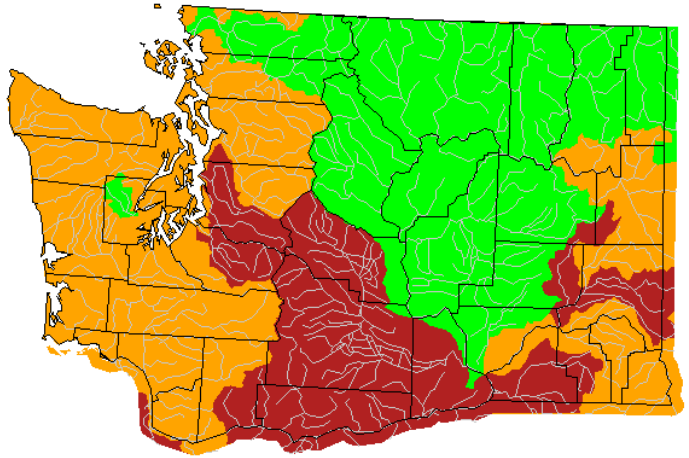
Monthly average streamflow

compared to historical streamflow

March 2001



March 2005



Explanation - Percentile classes						
Record Low	<10	10-24	25-75	76-90	>90	Record High
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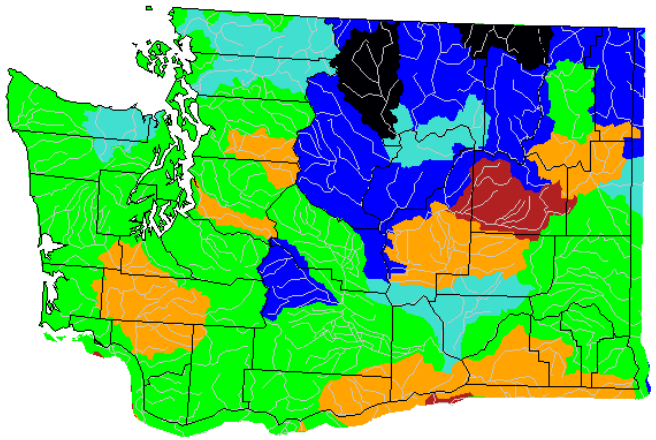
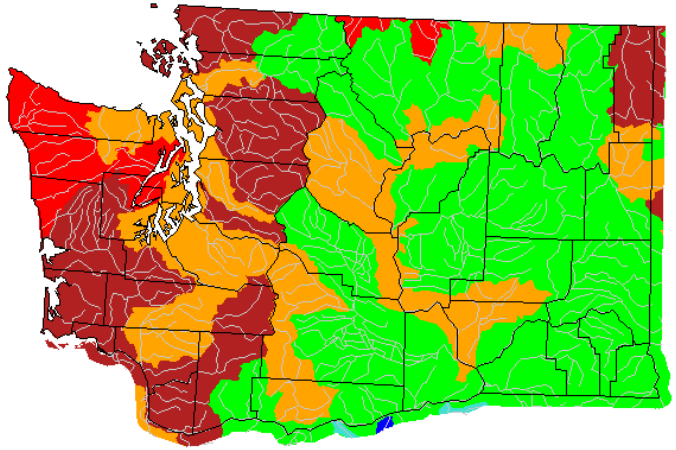
https://waterwatch.usgs.gov/

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

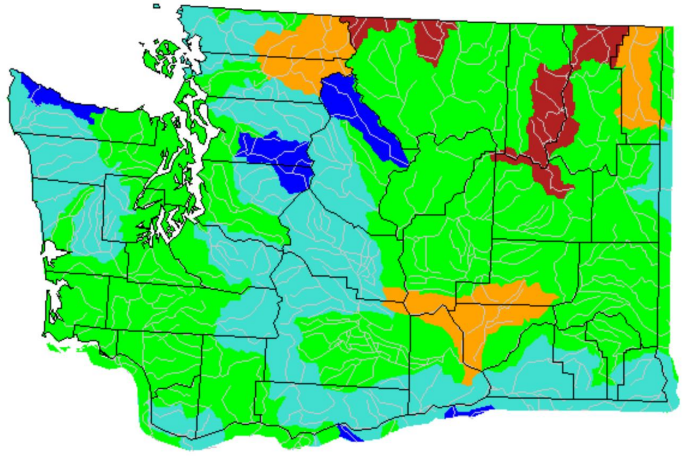
March 2015



March 2019



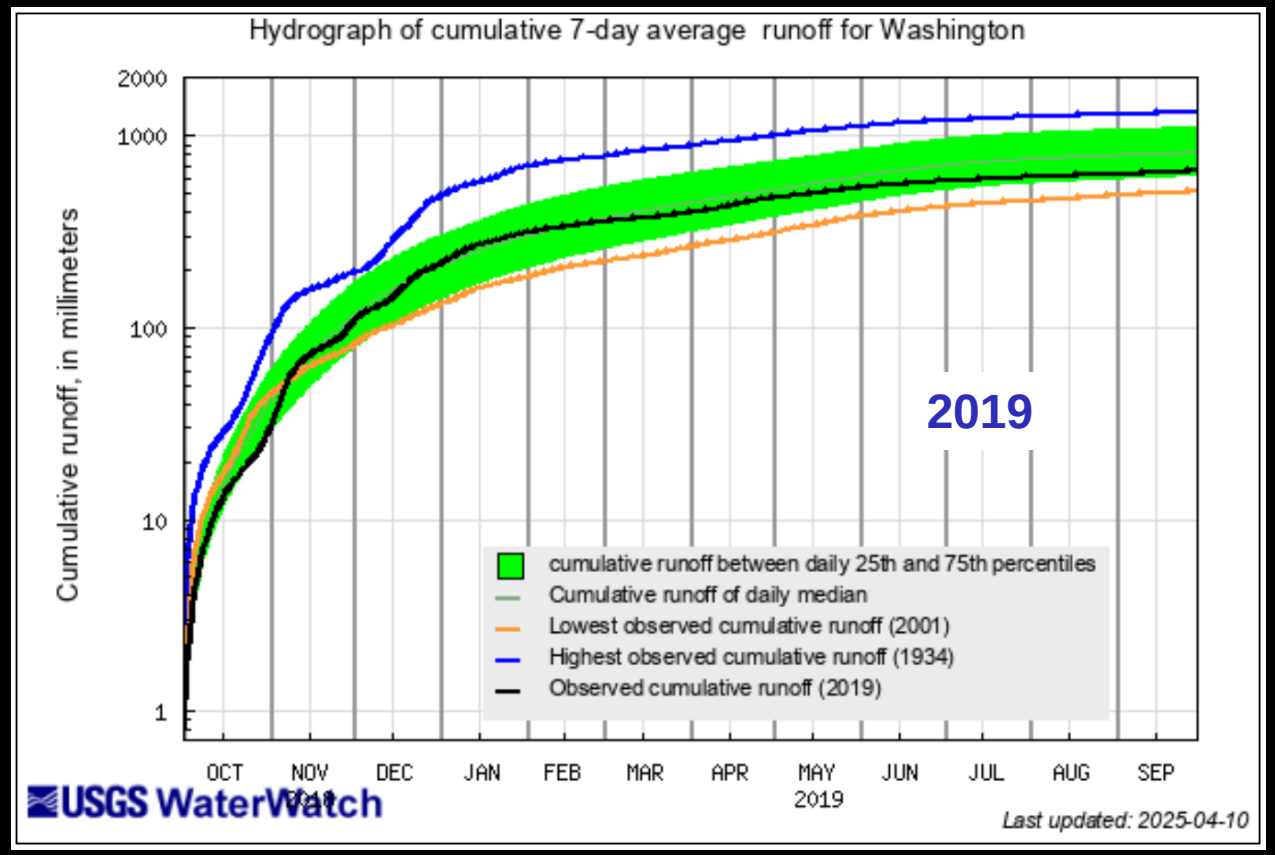
March 2025



Cumulative runoff hydrograph

Area-based runoff based on 7-day average

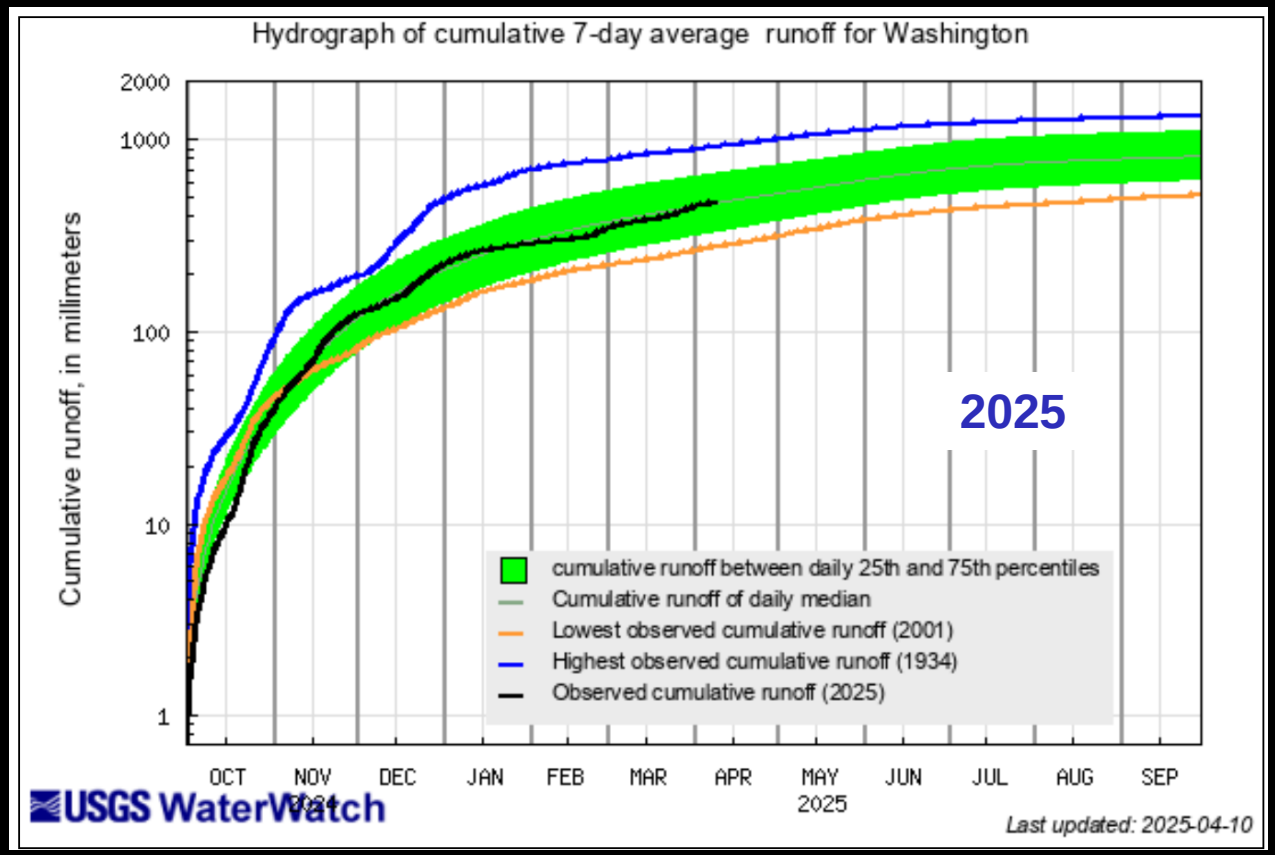
Normal for 2025 water year as of 8 April



2024 water year

Area-based runoff may have been computed from mixed regulated and unregulated streamflows

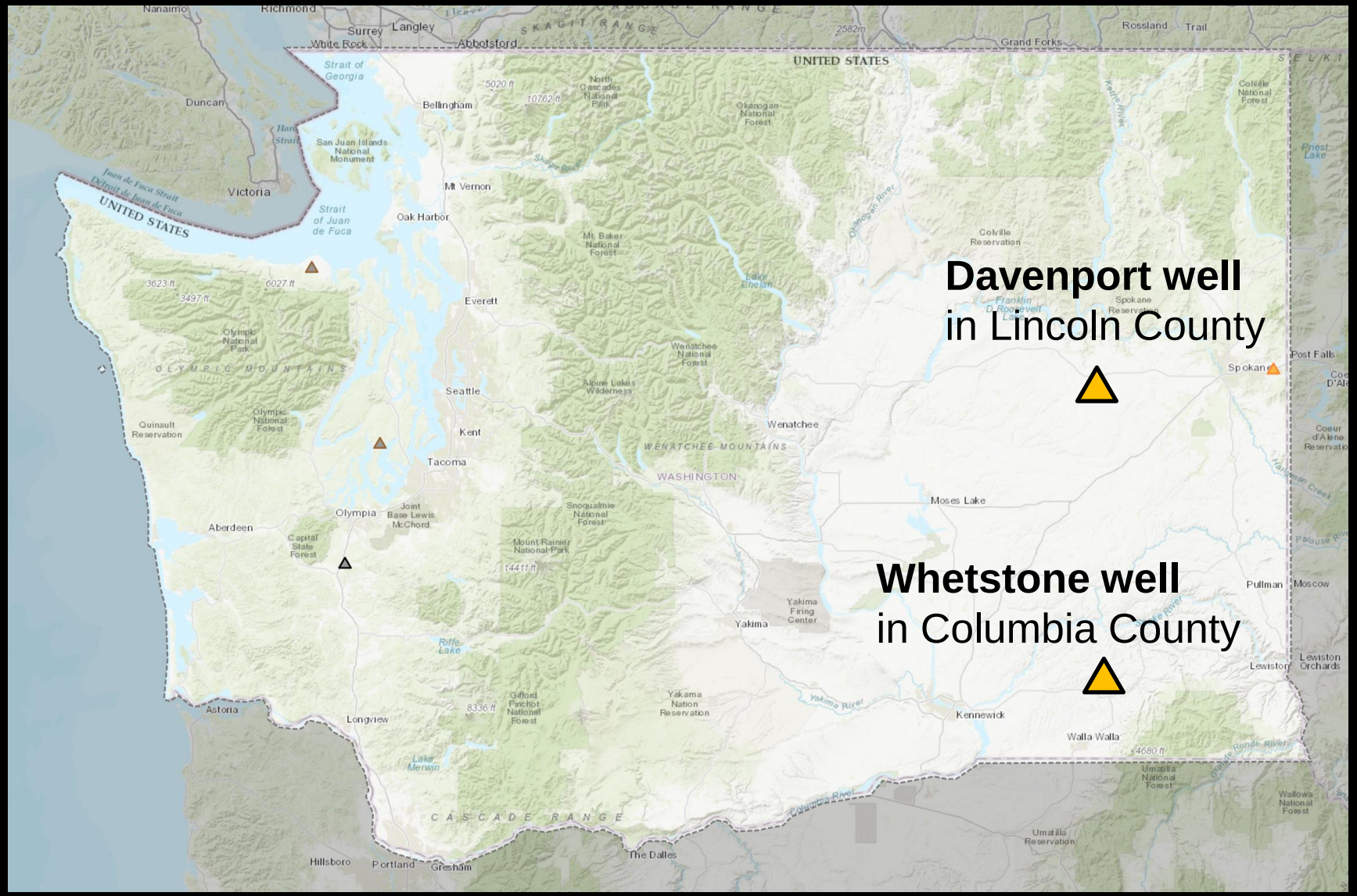
https://waterwatch.usgs.gov/



2025 water year

Preliminary Information-Subject to Revision.
Not for Citation or Distribution.

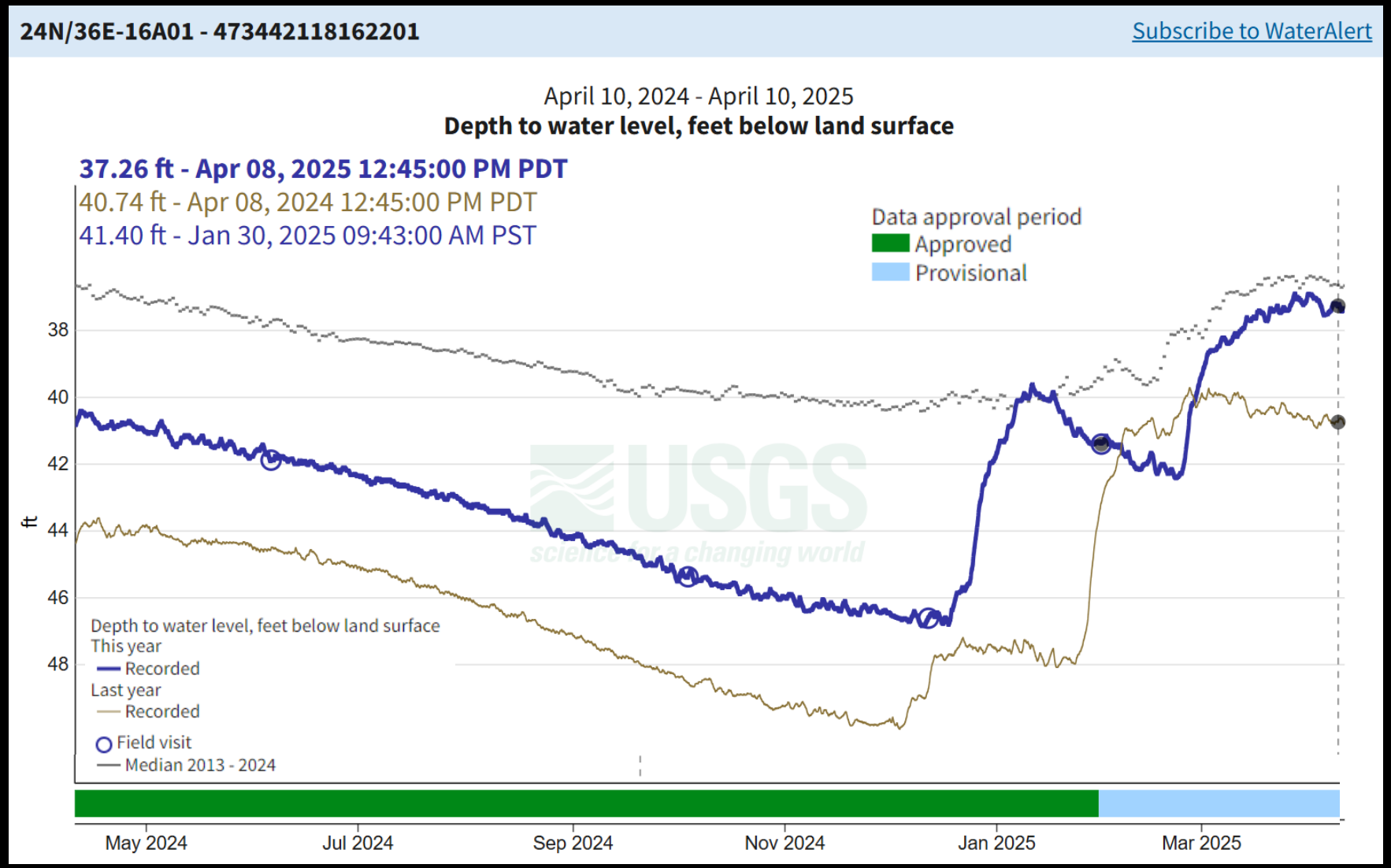
Two reference groundwater wells



https://dashboard.waterdata.usgs.gov/app/nwd/en/?aoi=state-wa

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

Davenport Well Groundwater Conditions



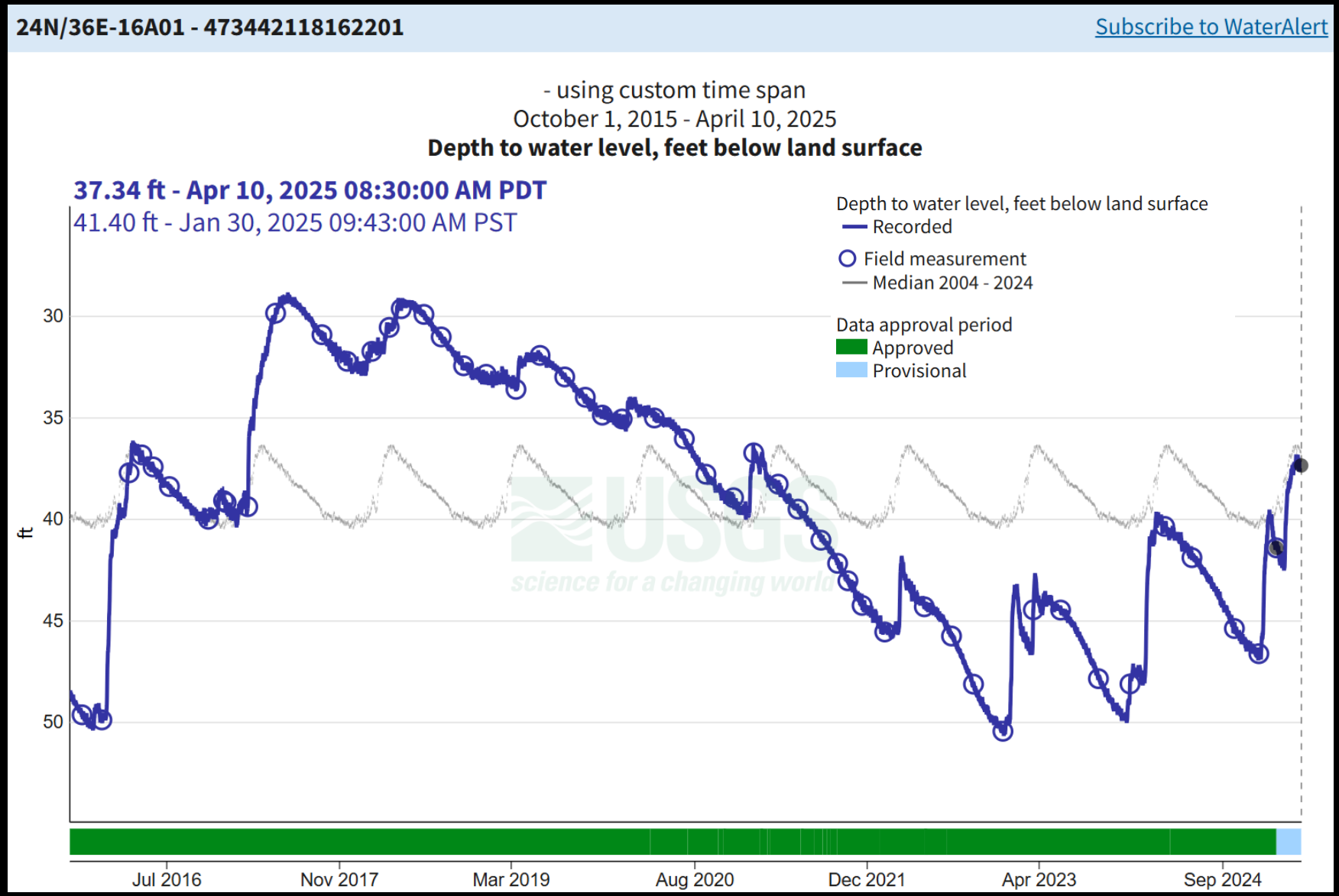
Davenport well

Well Details

- Lincoln County
- 117-ft deep
- Wanapum Basalt

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

Davenport Well Groundwater Conditions



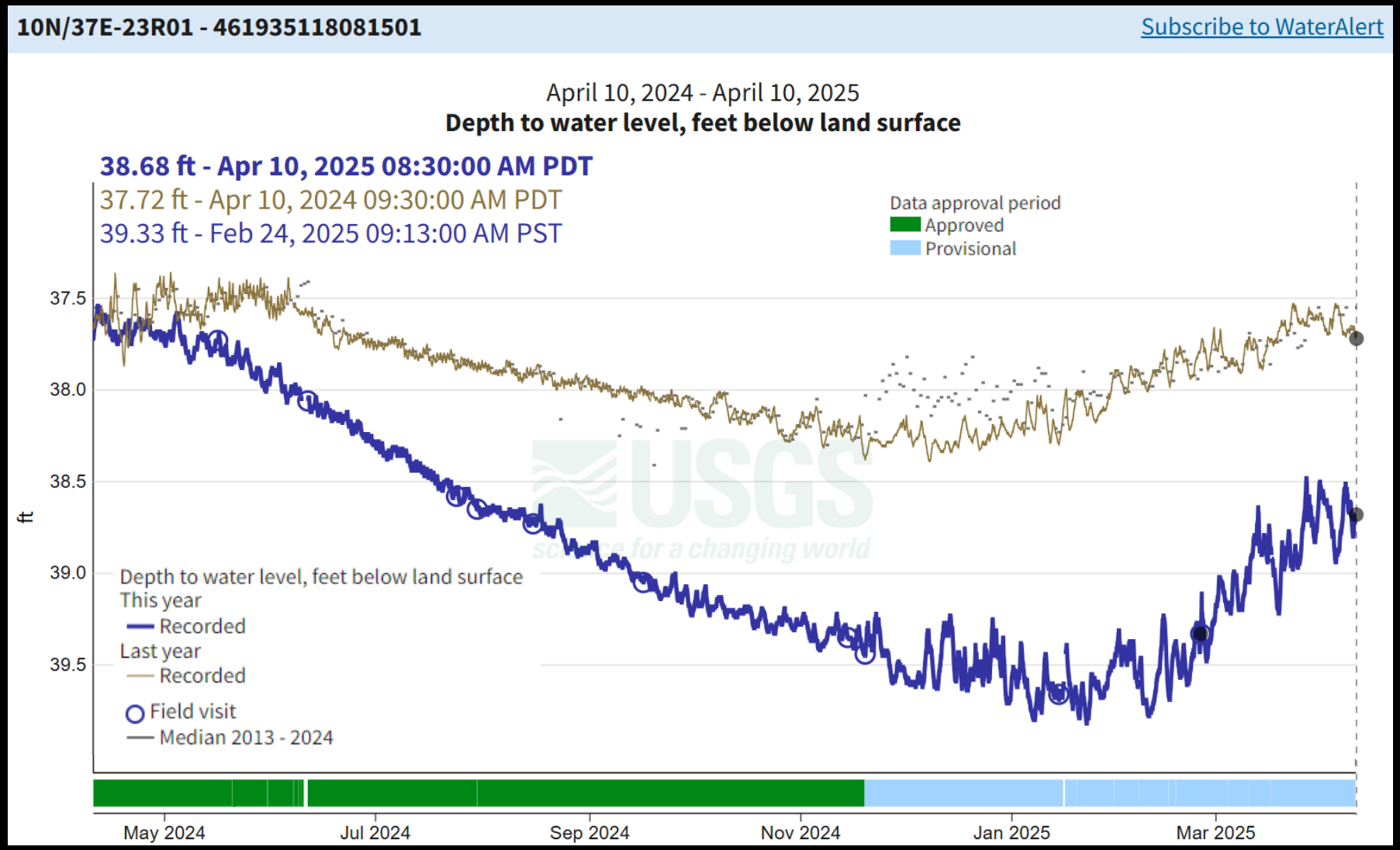
Well Details

- Lincoln County
- 117-ft deep
- Wanapum Basalt

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

https://dashboard.waterdata.usgs.gov/app/nwd/en/?aoi=state-wa

Whetstone Well Groundwater Conditions



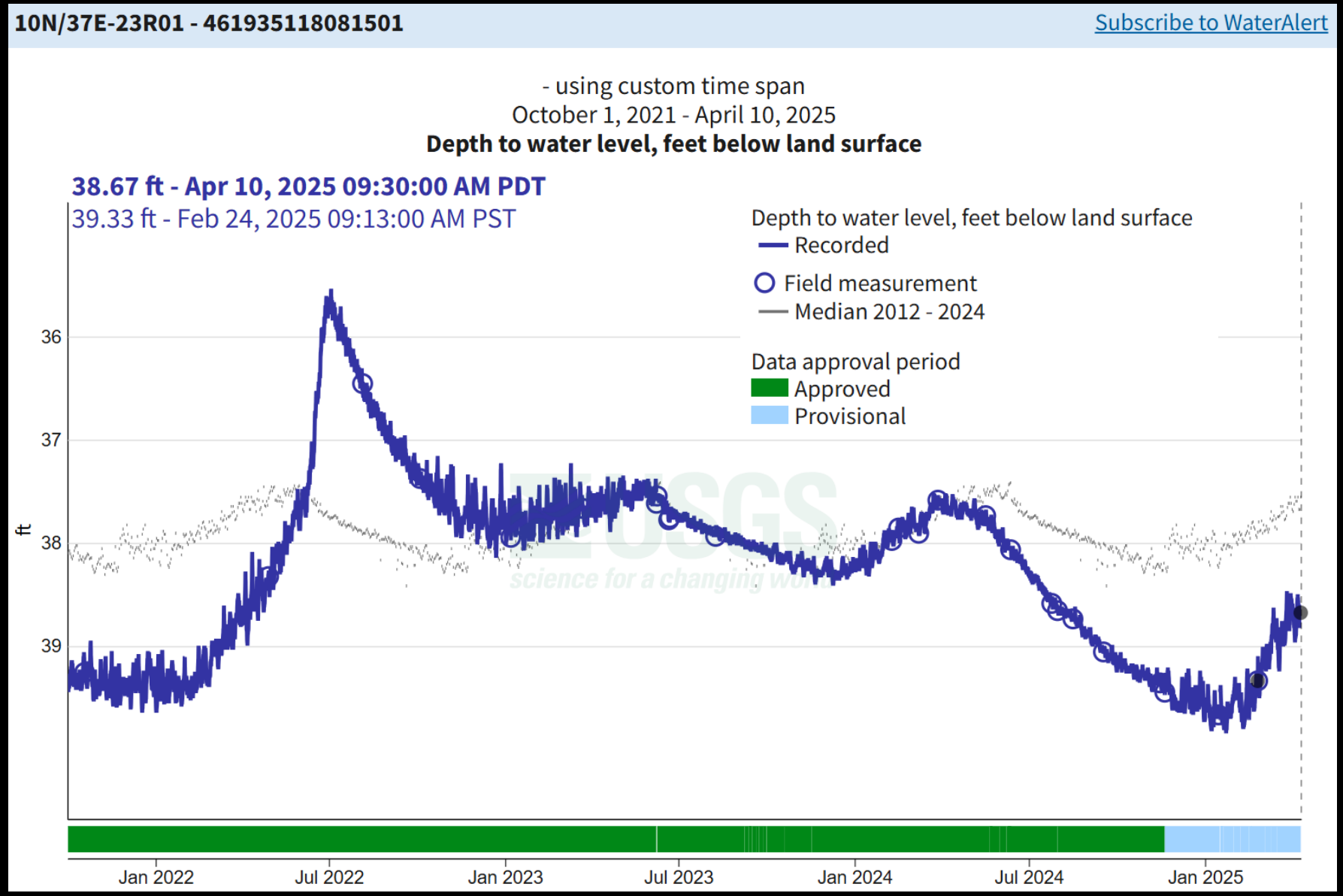
Whetstone well

Well Details:

- Columbia County near Waitsburg
- 172.5-ft deep
- Grande Ronde Basalt Formation

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

Whetstone Well Groundwater Conditions



Well Details:

- Columbia County near Waitsburg
- 172.5-ft deep
- Grande Ronde Basalt Formation

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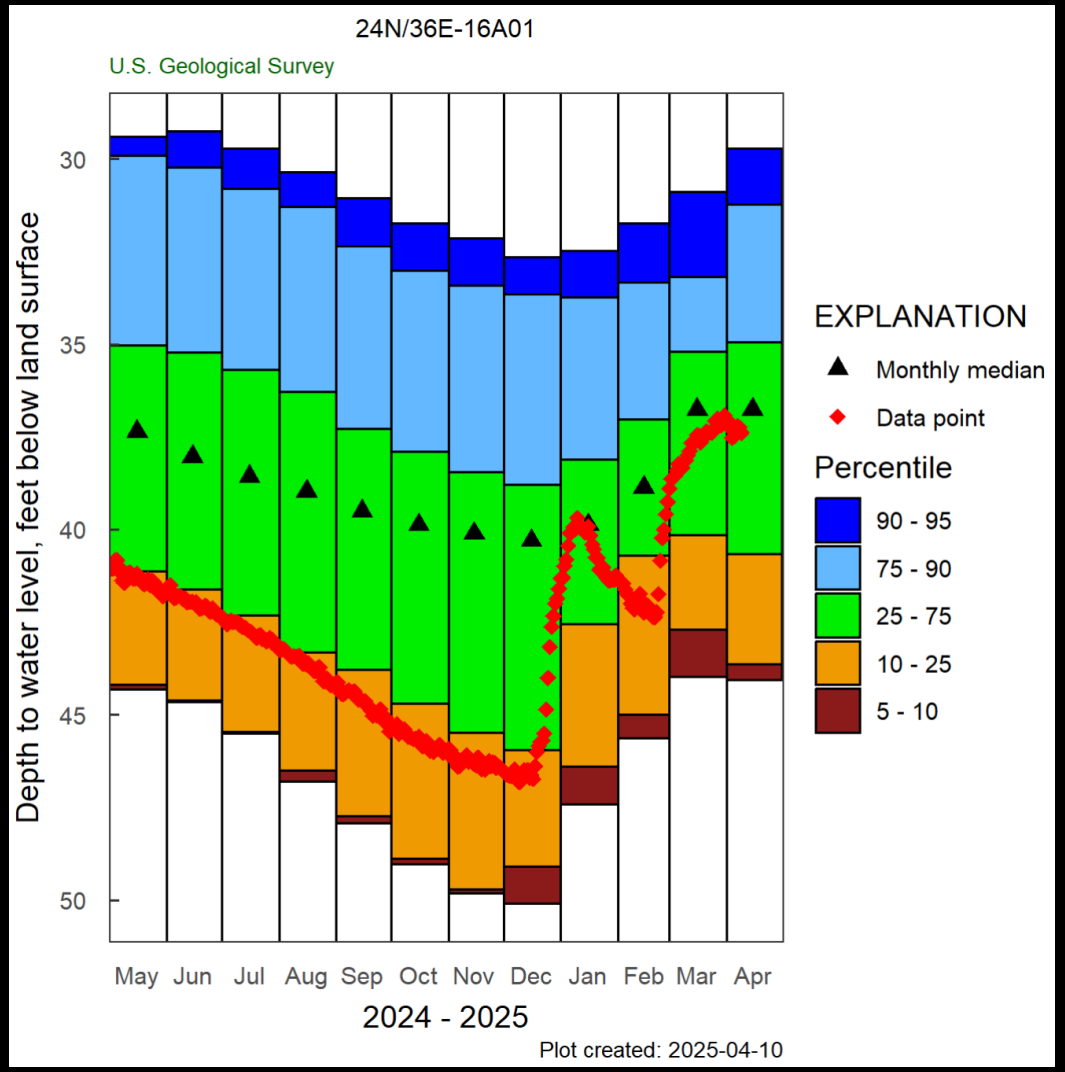
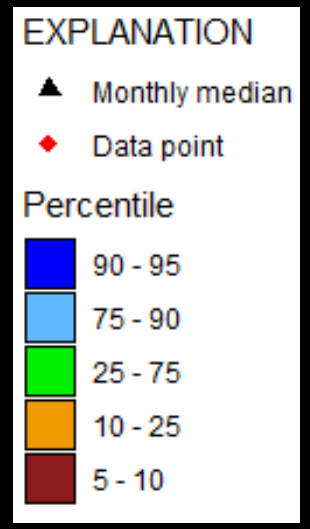
https://dashboard.waterdata.usgs.gov/app/nwd/en/?aoi=state-wa

Groundwater Conditions

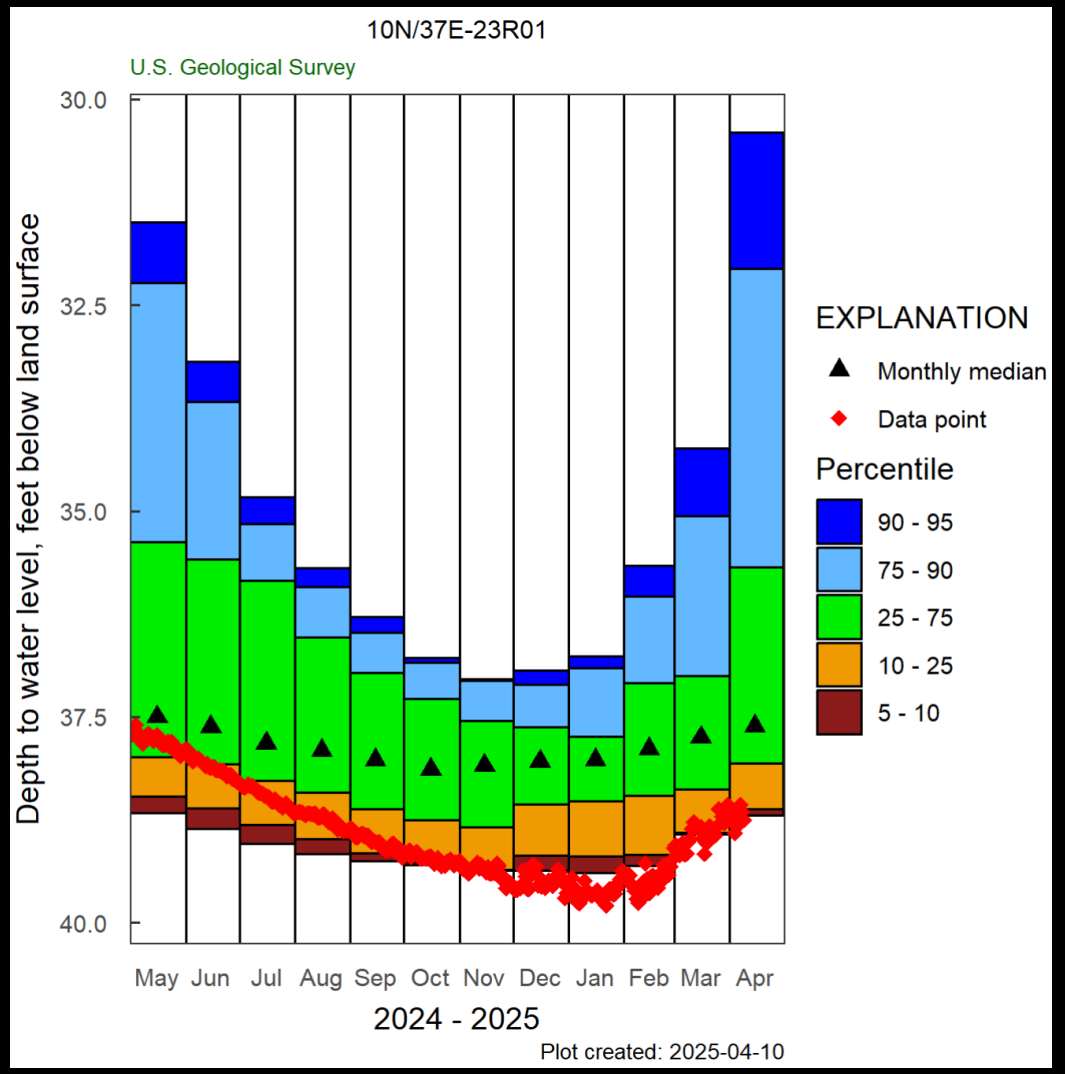
Davenport well





Preliminary Information- Subject to Revision. Not for Citation or Distribution.

Whetstone well



Summary of Washington Streamflow and Groundwater Conditions as of 9 April 2025

USGS science for a changing world

7-day average streamflow at eight index gaging stations:

Normal

- Chehalis River nr. Grand Mound
- EF Lewis River
- Hangman Creek
- Walla Walla River

Above Normal

- Quinault River
- Puyallup River nr. Orting

Much Above Normal

- American River
- Nooksack River

Cumulative Runoff Hydrograph

Normal for water year 2025

Area-based Runoff Duration Hydrograph

Normal for water year 2025

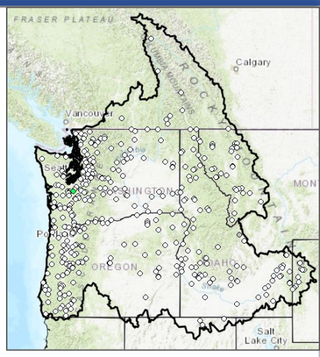
Monthly average groundwater conditions:

- Davenport well –
  - Normal
- Whetstone well
  - Below to much below normal

Preliminary Information-Subject to Revision. Not for Citation or Distribution.

NWS

Apr 2025 Washington Water Supply



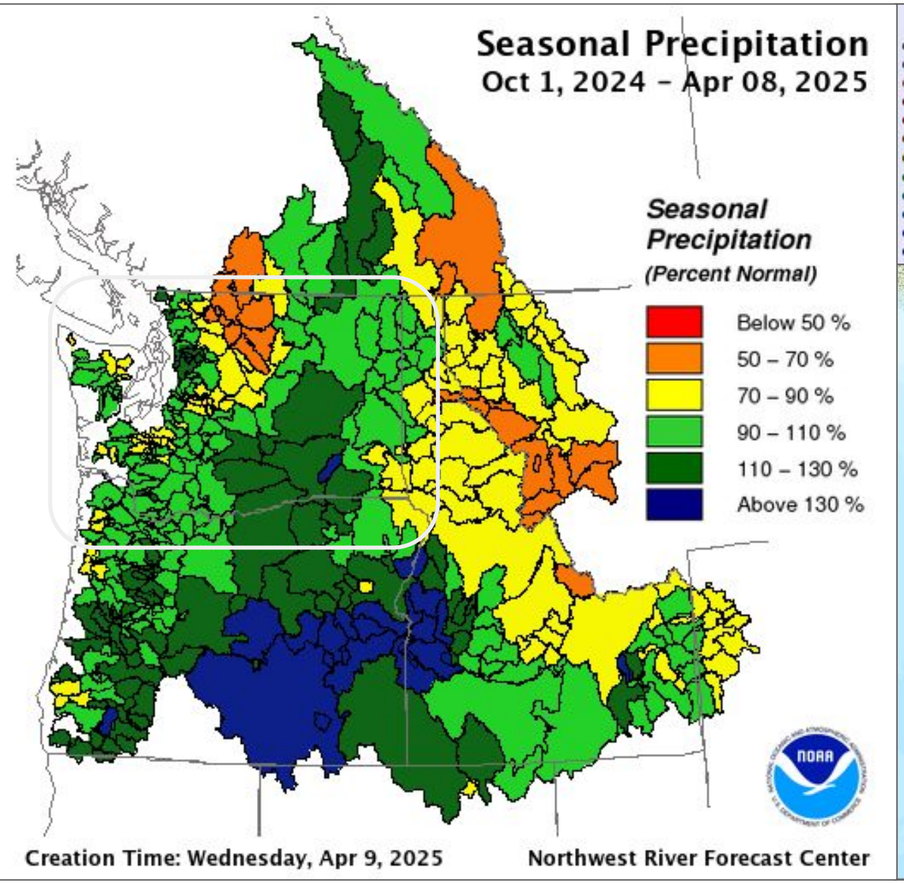
Amy Burke, Sr Hydrologist - Northwest River Forecast Center
NWRFC.watersupply@noaa.gov

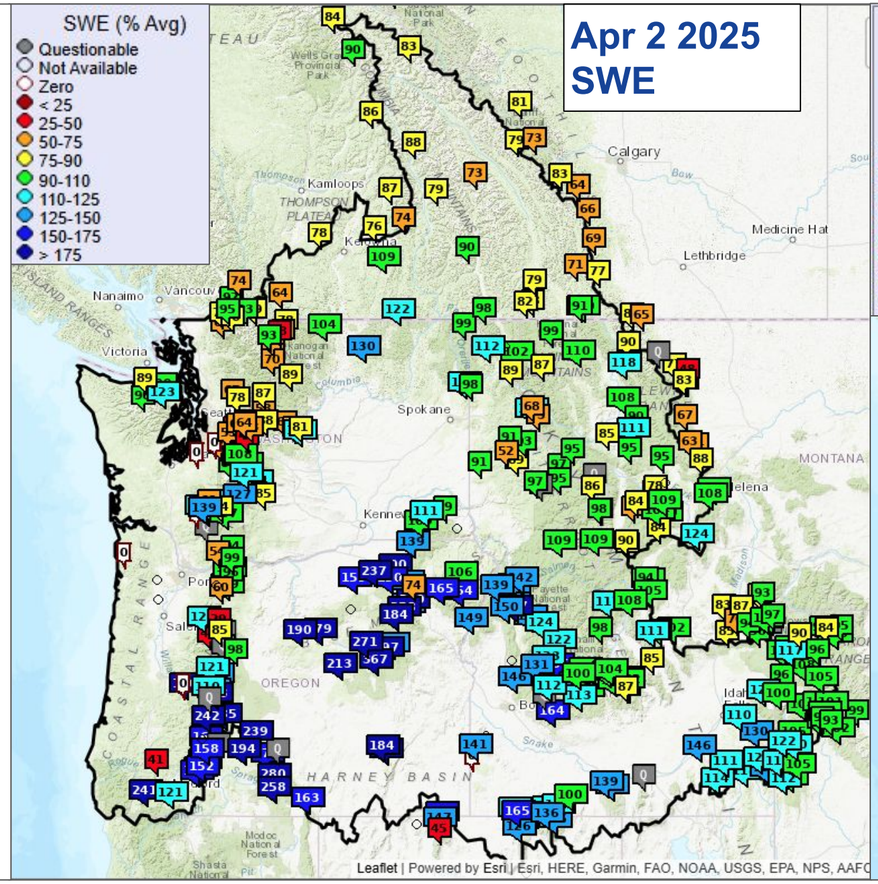
Brent Bower, Sr Service Hydrologist Seattle
~~Andy Bryant, Sr Service Hydrologist Portland~~ Tanya Fransen, Meteorologist In Charge
Robin Fox, Service Hydrologist Spokane
George Perry, Service Hydrologist Pendleton

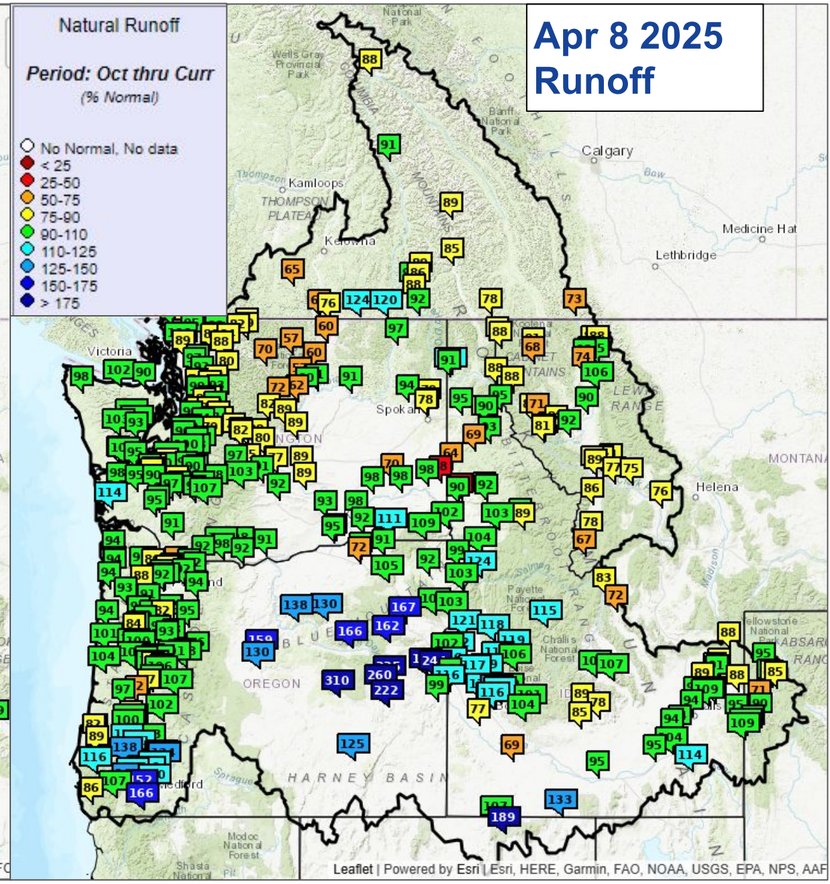
Washington State - Areas of Responsibility

- Northwest Washington - NWS Seattle - nws.seattle@noaa.gov
- Southwest Washington - NWS Portland - nws.portland@noaa.gov
- Northeast Washington - NWS Spokane - nws.spokane@noaa.gov
- Southeast Washington - NWS Pendleton - pdt.operations@noaa.gov

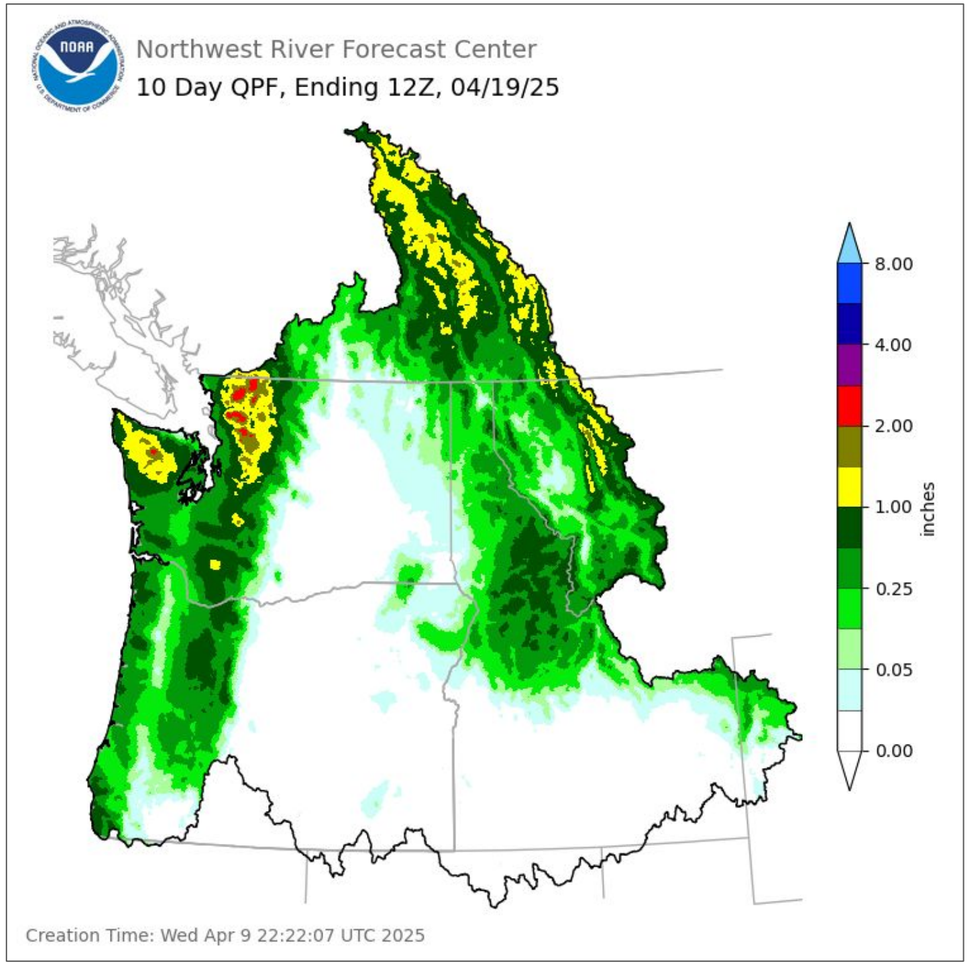
Precipitation, Snowpack and Runoff

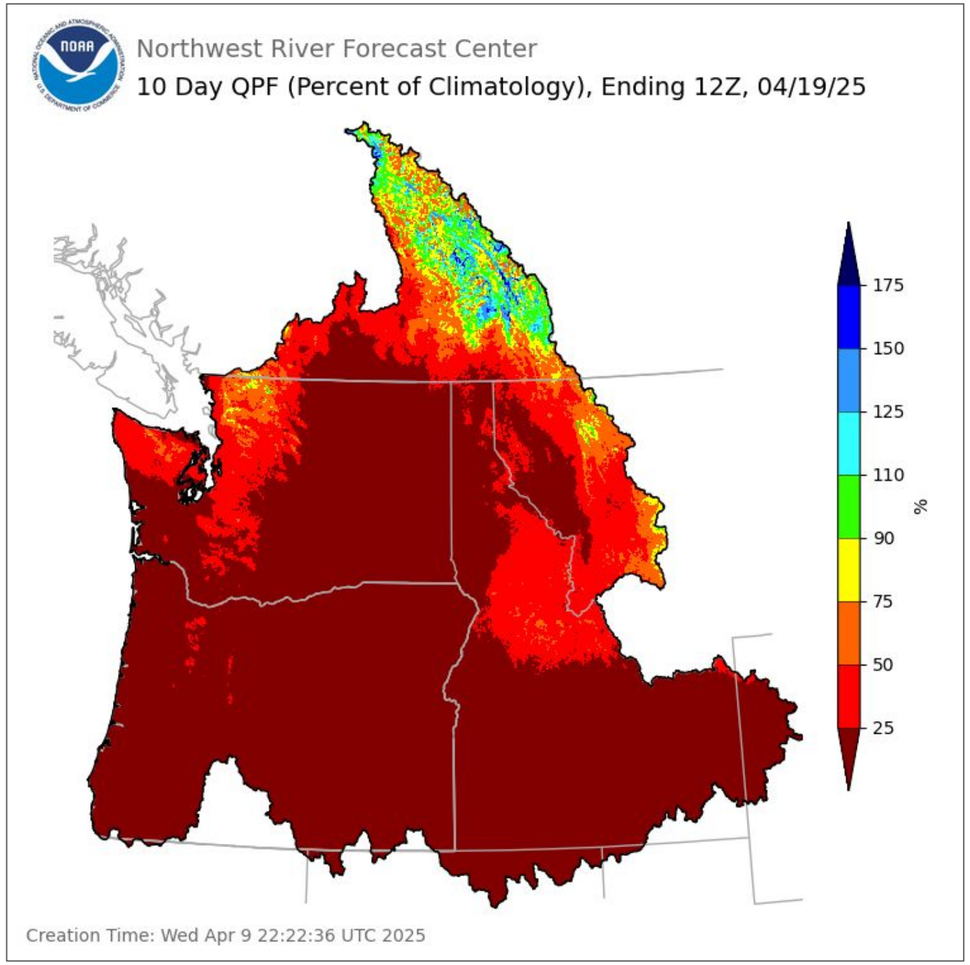






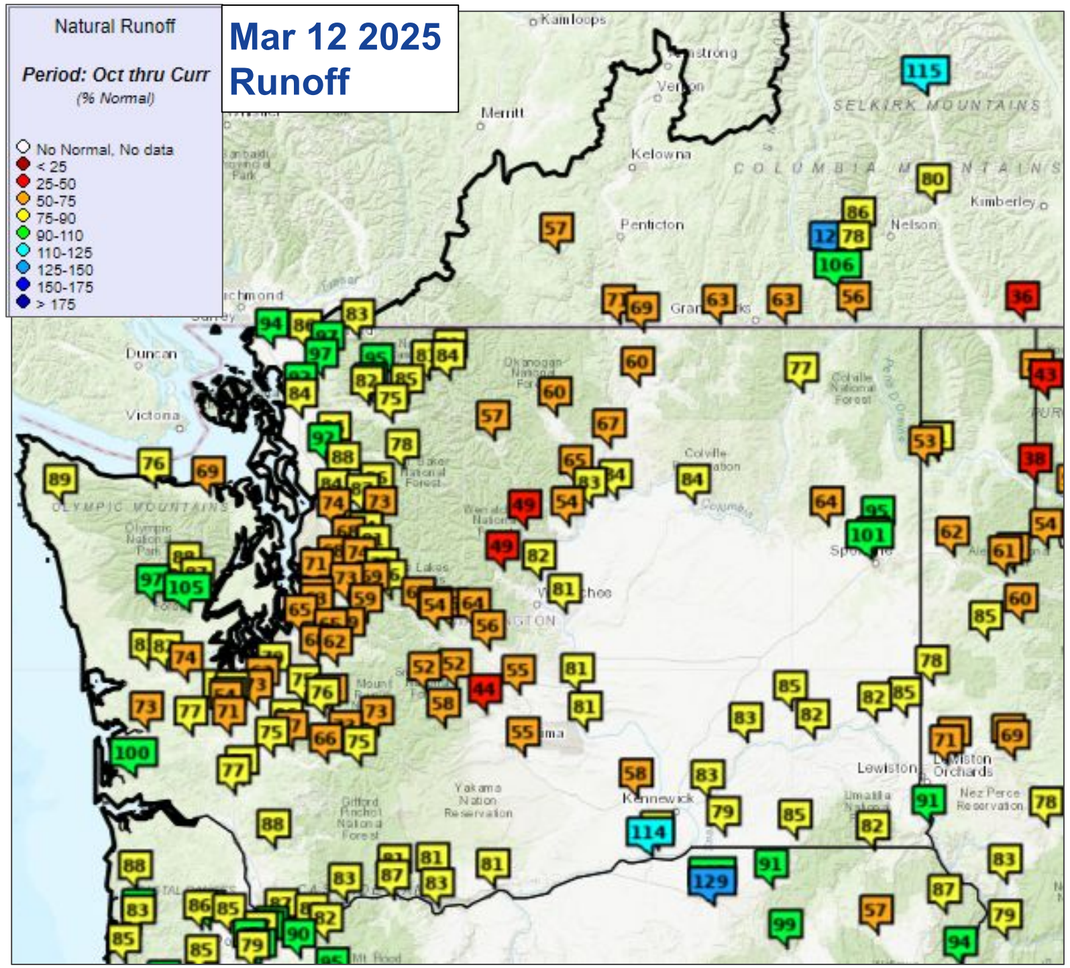
10 Day Precipitation Forecast used in ESP10 Forecasts

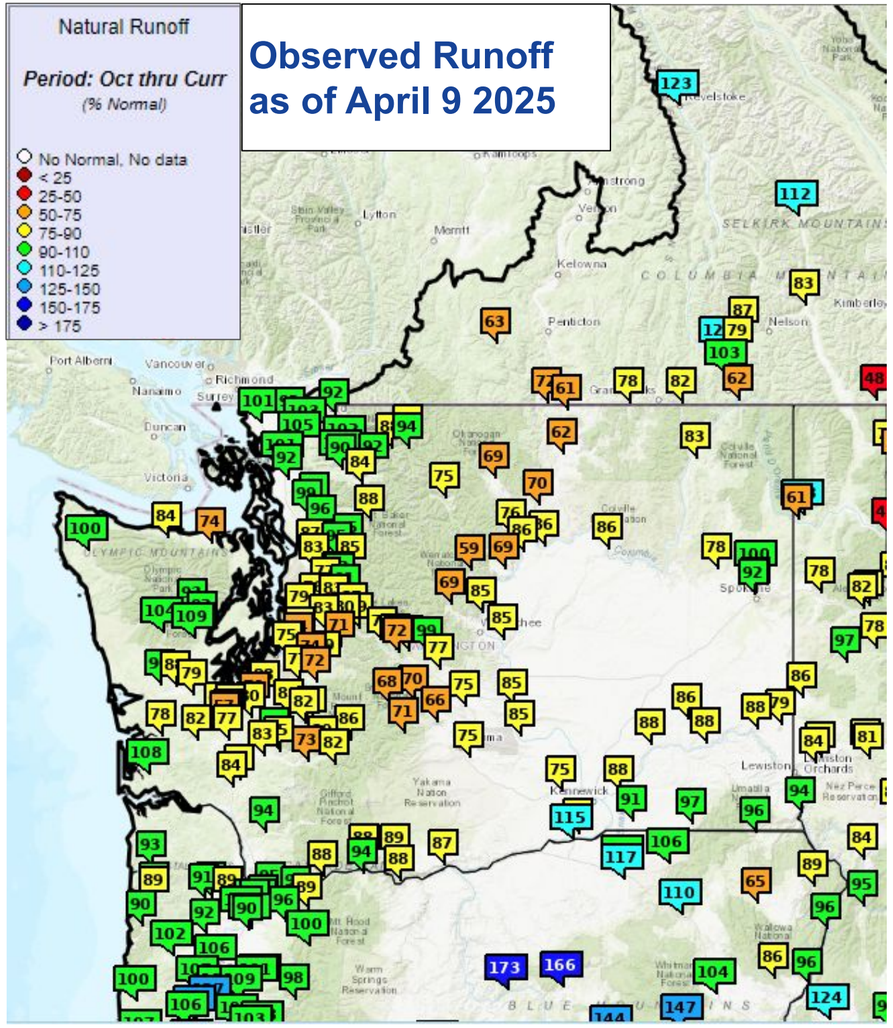




Quantitative Precipitation Forecast (QPF) Sources
Days 1 - 2 NWS Weather Forecast Offices (WFO) in the US, WPC in BC
Days 3 - 7 NWS Weather Prediction Center (WPC)
Days 8 - 10 NWS National Blend of Models (NBM)

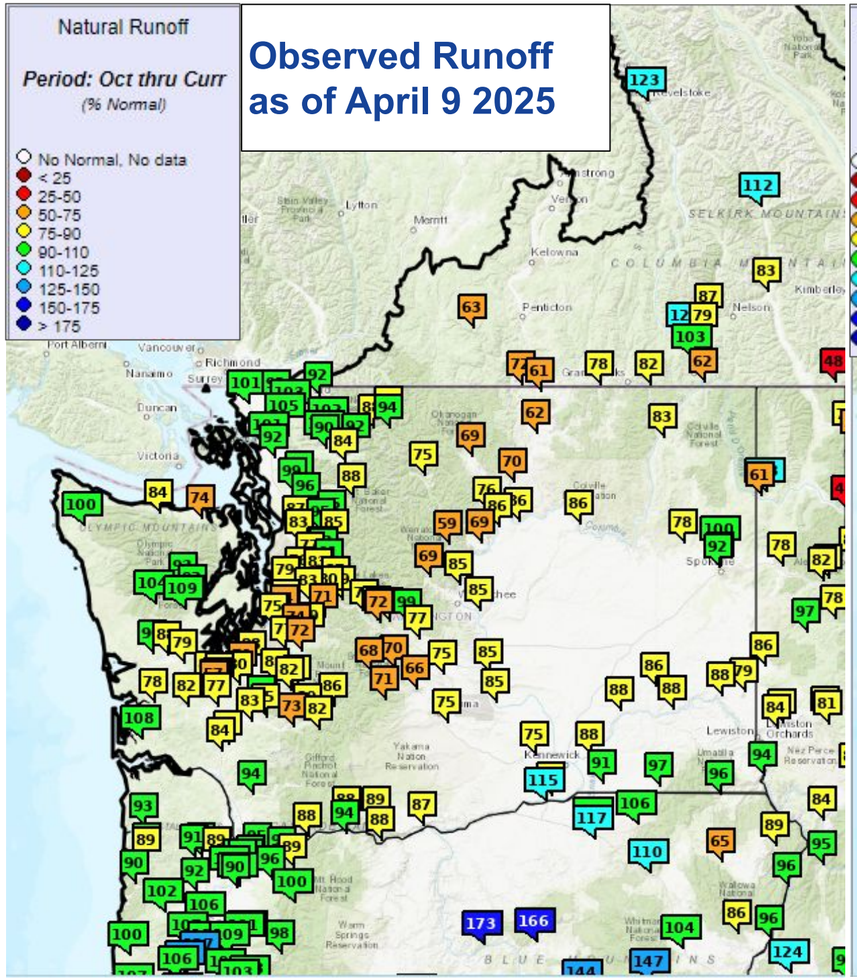
WY Runoff and Apr - Sep Forecasts

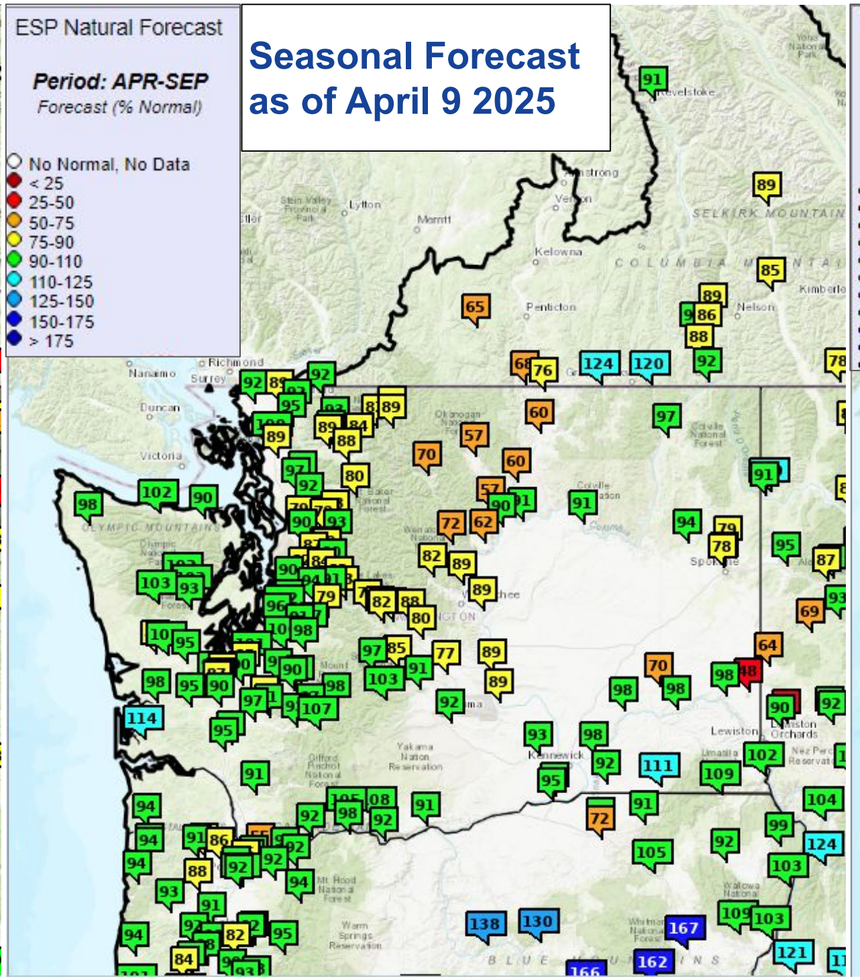


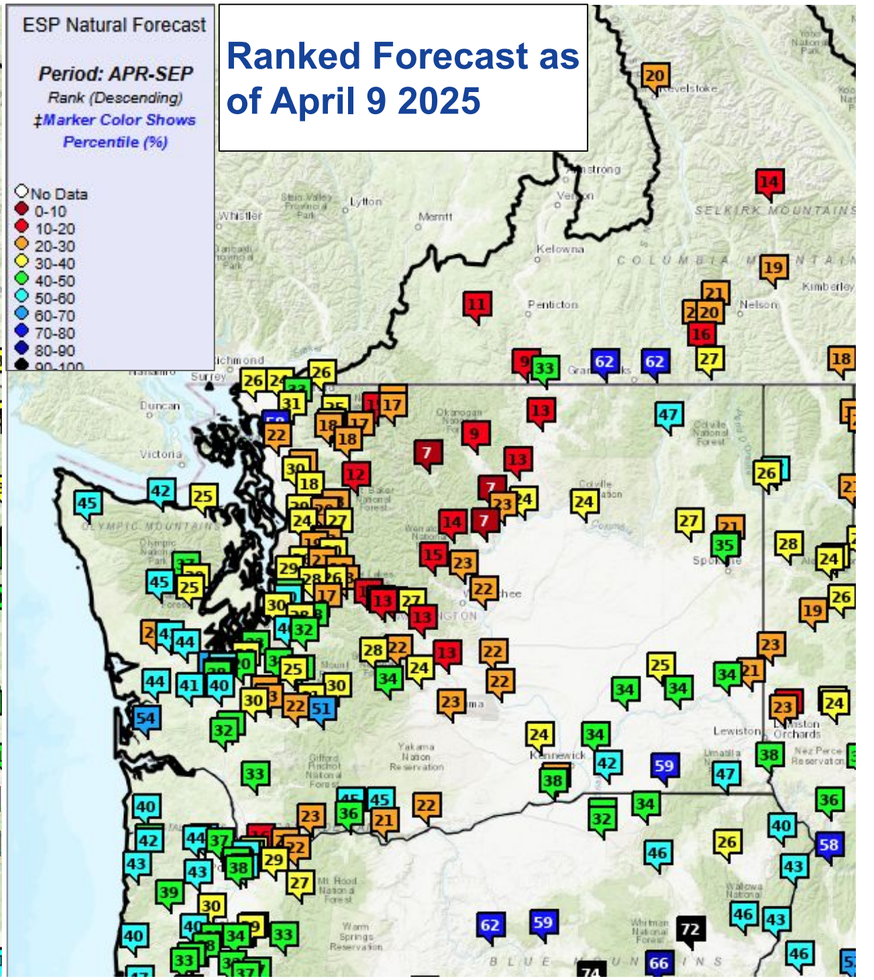


- Water year total runoff percent of normal has improved since March in some areas

WY Runoff and Apr - Sep Forecasts



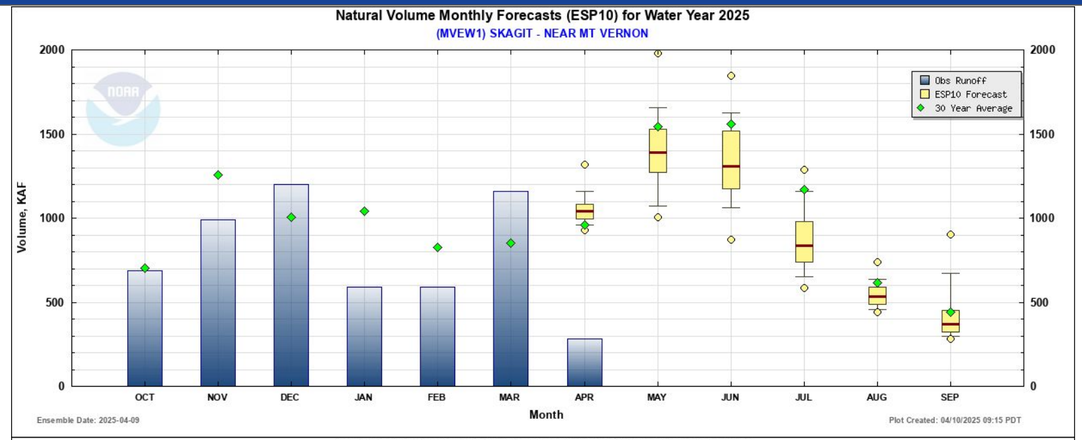


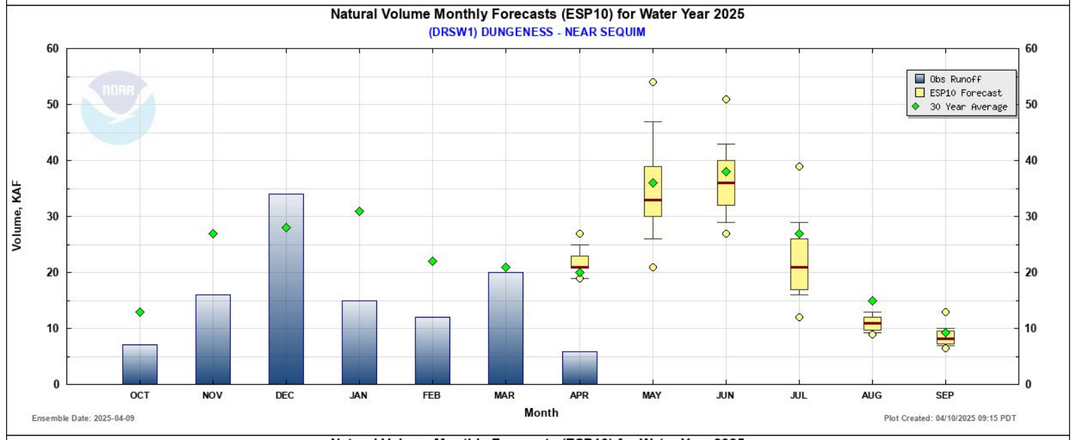


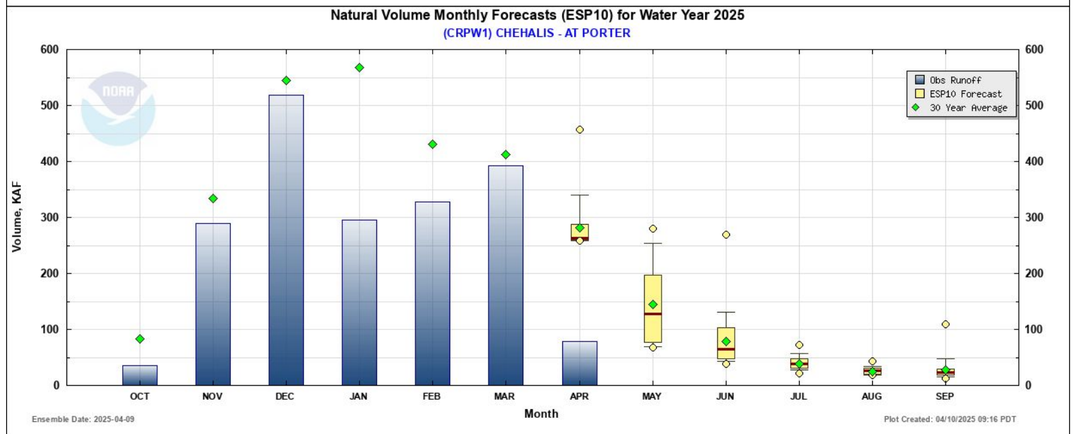
- Forecasts for the Apr-Sep period remain higher than observed runoff
- Ranking the forecasts volumes against their historical records helps highlight areas of concern

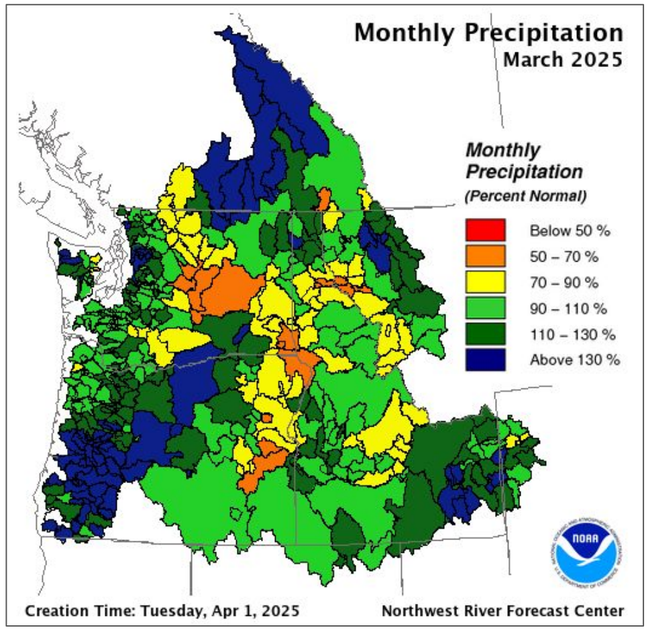
West Side Apr - Sep Forecasts

- Basins on the west slope of the Cascades had higher than normal March runoff



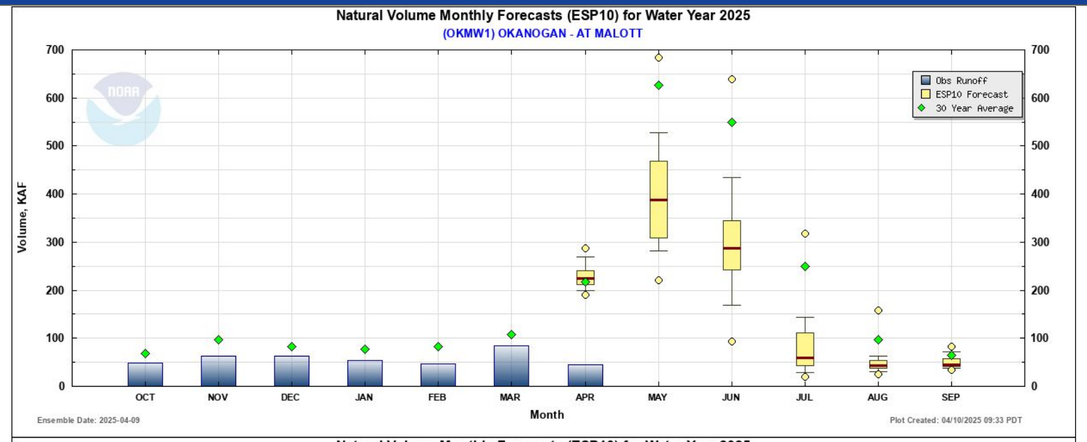


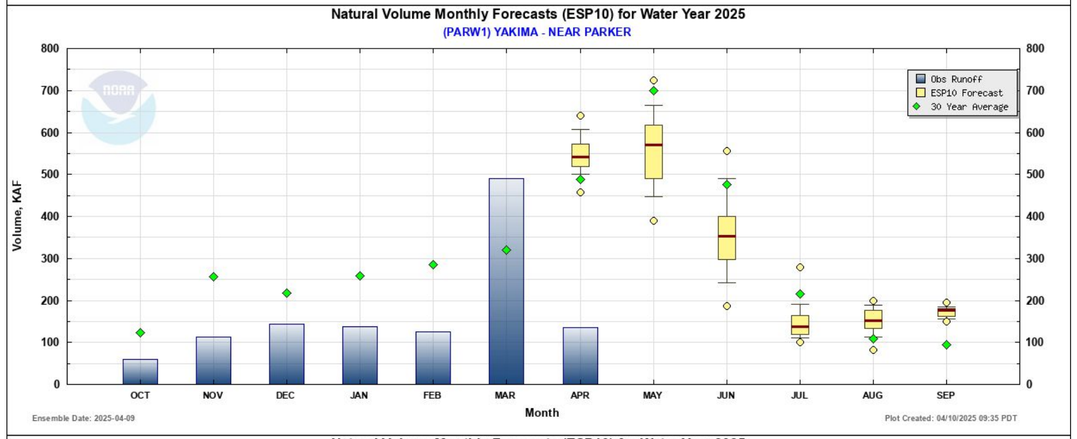


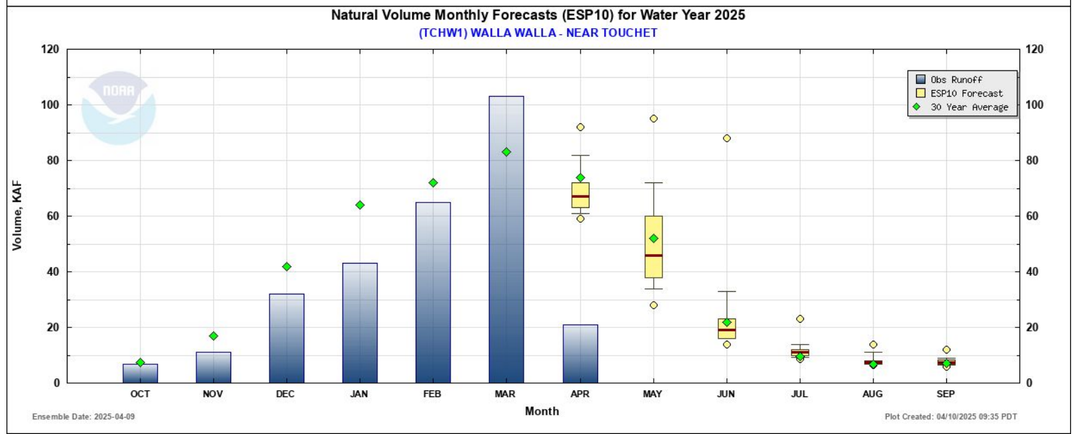


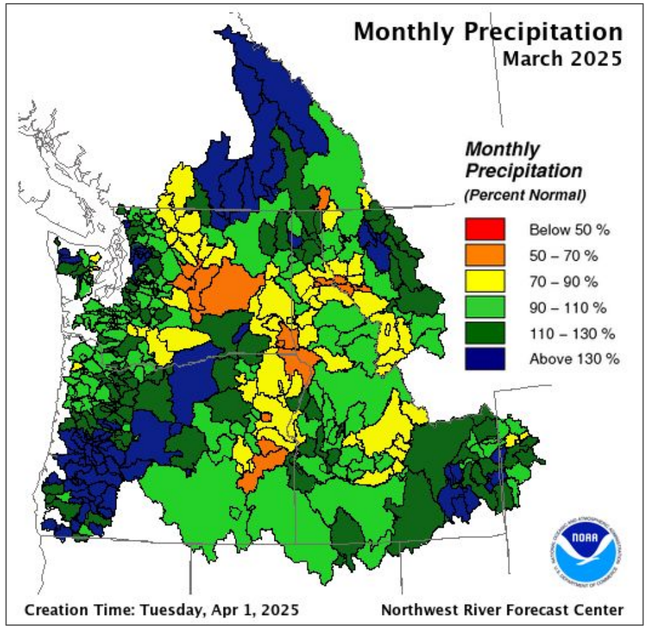
West Side Apr - Sep Forecasts

- Basins on the east slope of the Cascades had a mix of above and below normal March runoff









Takeaways

- March was wet compared to normal for most of Washington
- Runoff since October 1 improved over the last month but remains below normal in key areas
- Precipitation forecasts for the next 10 days is below normal. Will any precipitation make it over the cascades to the east side?
- Apr-Sep river forecasts have bumped up in many areas, yet still remain below normal especially for north-central, areas near the Cascade crest and Olympics